PORT OF OAKLAND

October 31, 1996

Mr. Barney Chan
Alameda County Health Care Agency
Environmental Protection Division
1131 Harbor Bay Pkwy., Suite #250
Alameda, CA 94502-6577

SUBJECT: SUBSURFACE INVESTIGATION REPORTS FOR KEEP ON TRUCKING AT 370 8TH AVENUE, OAKLAND, CALIFORNIA - FORMER ABOVEGROUND STORAGE TANK FACILITY (ADJACENT TO FORMER BUILDING H-213) AND FORMER UNDERGROUND STORAGE TANK FACILITY (ADJACENT TO BUILDING H-107)

Dear Mr. Chan:

Enclosed please find the Quarterly Groundwater Sampling Reports for the third quarter of 1996 at the former aboveground tank site adjacent to former Building H-213 and former underground storage tank adjacent to Building H-107 located at Keep on Trucking facilities.

If you have any questions or need additional information, please call me at (510) 272-1118.

Sincerely,

Jeffrey L. Rubin, CPSS, REA
Associate Environmental Scientist
Environmental Health and
Safety Compliance

Enclosures

cc with encl.: Richard Padovani, Keep on Trucking
Richard Hiett, Regional Water Quality Control Board, San Francisco Bay Region

SEPTEMBER 1996
QUARTERLY GROUNDWATER
SAMPLING REPORT AT
FORMER ABOVEGROUND STORAGE TANK
KEEP ON TRUCKING FACILITY (FORMER H-213)
370 8TH AVENUE
OAKLAND, CALIFORNIA

OCTOBER 30, 1996

SCI 133.005

0.3hr
12/2/96 Reviewed BC

SEPTEMBER 1996
QUARTERLY GROUNDWATER SAMPLING REPORT
AT
FORMER ABOVEGROUND STORAGE TANK
KEEP ON TRUCKING FACILITY (FORMER H-213)
370 8TH AVENUE
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SCI 133.005

CONTENTS

1.0 INTRODUCTION

Subsurface Consultants, Inc. (SCI) was retained to perform quarterly groundwater sampling and analysis at the Keep on Trucking Facility located at 370-8th Avenue in Oakland, California (Plate 1). On September 4, 5, 6, and 18, 1996 SCI collected groundwater samples from monitoring wells MW-1 through MW-6 located near the former location of Building H-213. The monitoring well locations are shown on Plate 2.

2.0 BACKGROUND

In October 1992, the United States Coast Guard (USCG) noted diesel fuel in Clinton Basin. A subsequent investigation by the Port of Oakland (Port) identified diesel fuel in storm drains at the Ninth Avenue Terminal. Further investigations by the Port indicated that the source of diesel was a leaking underground pipe connected to a diesel above ground storage tank (AST) at the subject site. The diesel AST was operated by the Keep on Trucking Company.

The diesel fuel system was disconnected in December 1992, and was removed by February 1993. In September 1993, Uribe and Associates conducted a subsurface investigation at the former location of the diesel fuel AST which consisted of installing and sampling four monitoring wells (MW-1 through MW-4).

While developing the four monitoring wells in September 1993, four to twelve inches of separate phase petroleum hydrocarbons (free product) was observed floating on the groundwater surface in monitoring well MW-4. Monitoring well MW-4 was purged once a week from September to November 1993. According to the Uribe and Associates report dated December 2, 1993, bailing activities ceased on November 1, 1993, after all the diesel had apparently been removed. However, during the quarterly groundwater monitoring and sampling event in June and September 1994, six to ten inches of free product were noted again in monitoring well MW-4. No bailing of the floating product was performed; however, a passive skimmer was installed in monitoring well MW-4 on April 10, 1995.

During a subsequent subsurface investigation performed by Clayton Environmental Consultants (Clayton) in March 1995, two additional monitoring wells (MW-5 and MW-6) were installed at the site (Plate 2). In April 1995, free product was identified in monitoring well MW-6 and dissolved petroleum hydrocarbons were present in monitoring well MW-5. A passive skimmer was installed by Clayton in well MW-6 on July 24, 1995. Free product has been skimmed or bailed from both well MW-4 and MW-6 on a periodic basis. SCI is currently removing accumulate free product on a monthly basis. Free product thickness and measured groundwater levels are summarized in Table 1. A summary of skimmer operations and free product removal at MW-4 and MW-6 is presented in Appendix A.

3.0 FIELD ACTIVITIES

On September 3, 1996, monitoring wells MW-1 through MW-6 were purged using new disposable bailers. Well volumes were calculated using depth to groundwater and total well depth measurements which were recorded to the nearest 0.01 foot upon arrival at the site. Approximately two to three times the volume of each well was purged to ensure that water representative of the aquifer was present prior to sampling. As a general guide, a minimum of three well volumes should be purged prior to sampling unless well recovery rates prohibit it. Standard operating procedure does allow fewer than three purged well volumes if the well does not recover within 24 hours as long as groundwater samples are not collected until field indicator parameters such as pH, temperature, and electrical conductivity stabilize indicating that fresh groundwater from the aquifer has replaced the initial stagnant water. All monitoring wells were purged until pH, temperature, and electrical conductivity stabilized.

The following parameters were noted during the sampling activities:

- Monitoring well identification
- Static water level
- Well depth
- Condition of water before purging (e.g., amount of free product)
- Purge rate and volume
- pH, temperature, and conductivity during purging
- Time purged
- Time of sample collection
- Sampling method
- Name of sampler
- Climatic conditions

The groundwater samples were collected using new disposable bailers. All other sampling equipment was thoroughly cleaned and decontaminated before coming into contact with the groundwater at each well. Details of the groundwater sampling event are provided in the water sampling field survey forms (Appendix B).

Groundwater samples were collected in such a manner as to minimize volatilization due to agitation and/or transfer from bailer to sample container. The samples were transferred into clean laboratory-supplied containers that were closed, labeled, placed immediately into an ice chest, and transported to Curtis & Tompkins, a state-certified laboratory, for analysis. To document and trace samples from time of collection to final analysis, signed chain-of-custody records were completed by SCI personnel. The chain-of-custody records accompanied the groundwater samples to the laboratory. The completed chain-of-custody records are included with the analytical report from the laboratory (Appendix C).

4.0 ANALYTICAL RESULTS

The groundwater samples from wells MW-1 through MW-6 were analyzed using the following Environmental Protection Agency Analytical Methods:

- Method 8015 (modified) for TPH-D and TPH-motor oil
- Method 8015 (modified) for TPH-G
- Method 8020 for BTEX

The analytical results are summarized in Table 1. The laboratory analytical reports for the current groundwater sampling event are included in Appendix C.

5.0 FINDINGS

Based on the laboratory analytical reports and SCI's field observations, our findings for this sampling event are as follows:

- Free product was observed in monitoring wells MW-4 and MW-6 before bailing.
- A sheen was observed in monitoring well MW-5 while purging.
- Concentrations of TPH-D and TPH-motor oil were detected in groundwater samples collected from all monitoring wells.
- TPH-G was detected in groundwater samples collected from wells MW-2, MW-4 and MW-6.
- Concentrations of benzene, ethylbenzene, and total xylenes were detected in groundwater samples from well MW-4. Benzene was detected in groundwater samples from well MW-6.

The next quarterly sampling event is scheduled for December 1996.

This report prepared by:

Jerome de Verrier
Staff Engineer

This report reviewed by:

Jeriann N. Alexander, PE, REA
Project Manager

October 30, 1996

TABLE 1
SUMMARY OF GROUNDWATER AND FREE PRODUCT MEASUREMENTS AND GROUNDWATER ANALYTICAL RESULTS

Keep on Trucking Facility (H-213)
Oakland, California
(SCI 133.005)

Monitoring Well	Sample Date	Depth to Water (feet)	Top of Casing Elevation (a)	Ground-water Elevation (a)	Depth to FP (feet)	FP Thickness (feet)	TPH as Diesel (ug/L)	TPH as Motor Oil (ug/L)	TPH as Gasoline (b) (ug/L)	Benzene (b) (ug/L)	Toluene (b) (ug/L)	Ethyl-benzene (b) (ug/L)	Total Xylenes (b) (ug/L)
MW-1	9/21/93	5.20	10.28	5.08	NA	0.00	**1,600**	--	ND	<0.4	<0.3	<0.3	<0.4
	1/12/94	5.15	10.28	5.13	NA	0.00	**610**	--	ND	<0.4	<0.3	<0.3	<0.4
	4/4/94	4.09	10.28	6.19	NA	0.00	**510**	--	<50	<0.5	<0.5	<0.5	<0.5
	6/2/94	4.82	10.28	5.46	NA	0.00	**540**	--	ND	<0.5	<0.5	<0.5	<0.5
	10/3/94	5.63	10.28	4.65	NA	0.00	**390**	--	ND	<0.4	<0.3	<0.3	<0.4
	12/22/94	5.00	10.28	5.28	NA	0.00	**210**	--	ND	ND	ND	ND	ND
	4/10/95	4.94	10.28	5.34	NA	0.00	**330**	--	<50	<0.4	<0.3	<0.3	<0.4
	7/24/95	5.02	10.28	5.26	NA	0.00	**230**	--	<50	<0.4	<0.3	<0.3	<0.4
	11/10/95	5.52	10.28	4.76	NA	0.00	**430**	--	<50	<0.4	<0.3	<0.3	<0.4
	2/20/96	4.49	9.99	5.50	NA	0.00	**590yh**	--	<50	<0.5	<0.5	<0.5	<1
	5/24/96	5.04	9.99	4.95	NA	0.00	**870yh**	**630y**	<50	<0.5	<0.5	<0.5	<0.5
	9/6/96	5.37	9.99	4.62	NA	0.00	**850yh**	**490yl**	<50	<0.5	<0.5	<0.5	<0.5
MW-2	9/21/93	4.40	10.69	6.29	NA	0.00	**1,900**	--	ND	**0.5**	<0.3	<0.3	<0.4
	1/12/94	4.75	10.69	5.94	NA	0.00	**1,800**	--	ND	<0.4	<0.3	<0.3	<0.4
	4/4/94	5.01	10.69	5.68	NA	0.00	**1,800**	--	<50	<0.5	<0.5	<0.5	<0.5
	6/2/94	4.61	10.69	6.08	NA	0.00	**870**	--	ND	<0.5	<0.5	<0.5	<0.5
	10/5/94	4.93	10.69	5.76	NA	0.00	**1,200**	--	ND	<0.4	<0.3	<0.3	<0.4
	12/22/94	4.43	10.69	6.26	NA	0.00	**610**	--	ND	ND	ND	ND	ND

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Monitoring Well	Sample Date	Depth to Water (feet)	Top of Casing Elevation (a)	Ground-water Elevation (a)	Depth to FP (feet)	FP Thickness (feet)	TPH as Diesel (ug/L)	TPH as Motor Oil (ug/L)	TPH as Gasoline (b) (ug/L)	Benzene (b) (ug/L)	Toluene (b) (ug/L)	Ethyl-benzene (b) (ug/L)	Total Xylenes (b) (ug/L)
MW-2	4/10/95	4.03	10.69	6.66	NA	0.00	**550**	--	<50	<0.4	<0.3	<0.3	<0.4
	7/24/95	4.41	10.69	6.28	NA	0.00	**960**	--	**70**	<0.4	<0.3	<0.3	<0.4
	11/10/95	4.59	10.69	6.10	NA	0.00	**920**	--	<50	<0.4	<0.3	<0.3	<0.4
	2/20/96	3.81	10.32	6.51	NA	0.00	**1,700h**	--	<50	<0.5	<0.5	<0.5	<1
	5/24/96	4.41	10.32	5.91	NA	0.00	**2,800yh**	**1,200y**	<50	<0.5	<0.5	<0.5	<0.5
	9/5/96	3.98	10.32	6.34	NA	0.00	**2,900**	**760yl**	**58z**	<0.5	<0.5	<0.5	<0.5
MW-3	9/21/93	15.20	10.54	-4.66	NA	0.00	**680**	--	ND	<0.4	**0.3**	<0.3	<0.4
	1/12/94	5.70	10.54	4.84	NA	0.00	**430**	--	ND	<0.4	<0.3	<0.3	<0.4
	4/4/94	4.23	10.54	6.31	NA	0.00	**690**	--	<50	<0.5	<0.5	<0.5	<0.5
	6/2/94	3.86	10.54	6.68	NA	0.00	**280**	--	ND	<0.5	<0.5	<0.5	<0.5
	10/4/94	5.44	10.54	5.10	NA	0.00	**480**	--	ND	<0.4	<0.3	<0.3	<0.4
	12/22/94	4.87	10.54	5.67	NA	0.00	**630**	--	ND	ND	ND	ND	ND
	4/10/95	7.64	10.54	2.90	NA	0.00	**830**	--	<50	<0.4	<0.3	<0.3	<0.4
	7/24/95	3.62	10.54	6.92	NA	0.00	**460**	--	<50	<0.4	<0.3	<0.3	<0.4
	11/10/95	5.11	10.54	5.43	NA	0.00	**2,100**	--	<50	<0.4	**0.7**	<0.3	<0.4
	2/20/96	4.14	10.18	6.04	NA	0.00	**620h**	--	<50	<0.5	<0.5	<0.5	<1
	5/24/96	4.49	10.18	5.69	NA	0.00	**1,100yh**	**550y**	<50	<0.5	<0.5	<0.5	<0.5
	9/18/96	4.48	10.18	5.70	NA	0.00	**1,500**	**890yl**	<50	<0.5	<0.5	<0.5	<0.5

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MW-4	9/21/93	5.80	12.33	6.53	5.13	0.67	**1,300**	--	ND	**140**	**110**	**40**	**235**
	1/12/94	4.10	12.33	8.23	sheen	sheen	**32,000**	--	ND	**71**	**41**	**20**	**150**
	4/4/94	4.20	12.33	8.13	3.62	0.58	**410,000**	--	**6,200**	**140**	**20**	**47**	**310**
	6/2/94	3.88	12.33	8.45	3.38	0.50	NS	NS	NS	NS	NS	NS	NS
	10/3/94	4.80	12.33	7.53	4.80	1.00	NS	NS	NS	NS	NS	NS	NS
	12/22/94	3.47	12.33	8.86	2.63	0.84	NS	NS	NS	NS	NS	NS	NS
	4/10/95	3.80	12.33	8.53	NA	0.00	NS	NS	NS	NS	NS	NS	NS
	5/16/95	3.07	12.33	9.26	NA	NA	NS	NS	NS	NS	NS	NS	NS
	7/24/95	3.65	12.33	8.68	NA	0.00	**21,000**	--	**2,400**	**140**	**74**	**34**	**40**
	11/10/95	NM	12.33	NA	NA	0.00	NS	NS	NS	NS	NS	NS	NS
	2/20/96	NM	11.98	NA	NA	0.40	NS	NS	NS	NS	NS	NS	NS
	5/24/96	2.96	11.98	9.02	NA	0.02	**37,000**	**2,800yl**	**690y**	**44**	<2.5	**18**	**7.7**
	9/4/96	4.65	11.98	7.33	NA	0.00	**240,000**	**26,000yl**	**1,000h**	**100**	<0.5	**5.2**	**7.2**
MW-5	4/10/95	4.64	11.84	7.20	NA	0.00	**6,200**	--	**1,100**	**3.1**	<0.3	**2.9**	**11.3**
	7/24/95	5.24	11.84	6.60	NA	0.00	**4,800**	--	**720**	**3.1**	**0.7**	**0.6**	**0.7**
	11/10/95	5.38	11.84	6.46	NA	0.00	**3,700**	--	**260**	**0.8**	**0.5**	**0.6**	**1.9**
	2/20/96	2.69	11.84	9.15	NA	0.00	**440h**	--	**150y**	<0.5	<0.5	<0.5	<1
	5/24/96	2.67	11.84	9.17	NA	0.00	**4,600yh**	**1900y**	**82y**	<0.5	<0.5	<0.5	<0.5
	9/4/96	5.44	11.84	6.40	NA	0.00	**7,700yh**	**1,900yl**	<50	<0.5	<0.5	<0.5	<0.5

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Monitoring Well	Sample Date	Depth to Water (feet)	Top of Casing Elevation (a)	Ground-water Elevation (a)	Depth to FP (feet)	FP Thickness (feet)	TPH as Diesel (ug/L)	TPH as Motor Oil (ug/L)	TPH as Gasoline (b) (ug/L)	Benzene (b) (ug/L)	Toluene (b) (ug/L)	Ethyl-benzene (b) (ug/L)	Total Xylenes (b) (ug/L)
MW-6	4/10/95	4.12	11.86	7.74	4.12	0.00	**10,000**	--	**1,300**	**4.4**	<0.3	**0.7**	**0.8**
	7/24/95	5.19	11.86	6.67	4.09	1.10	NS	NS	NS	NS	NS	NS	NS
	11/10/95	NM	11.86	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS
	2/20/96	NM	11.86	NA	NA	0.50	NS	NS	NS	NS	NS	NS	NS
	5/24/96	4.15	11.86	7.71	4.15	0.42	**240,000**	**5,500yl**	**280,000yh**	<250	<250	<250	<250
	9/5/96	5.19	11.86	6.67	5.15	0.04	**50,000**	**3,200yl**	**200h**	**5.3**	<5.0	<5.0	<5.0

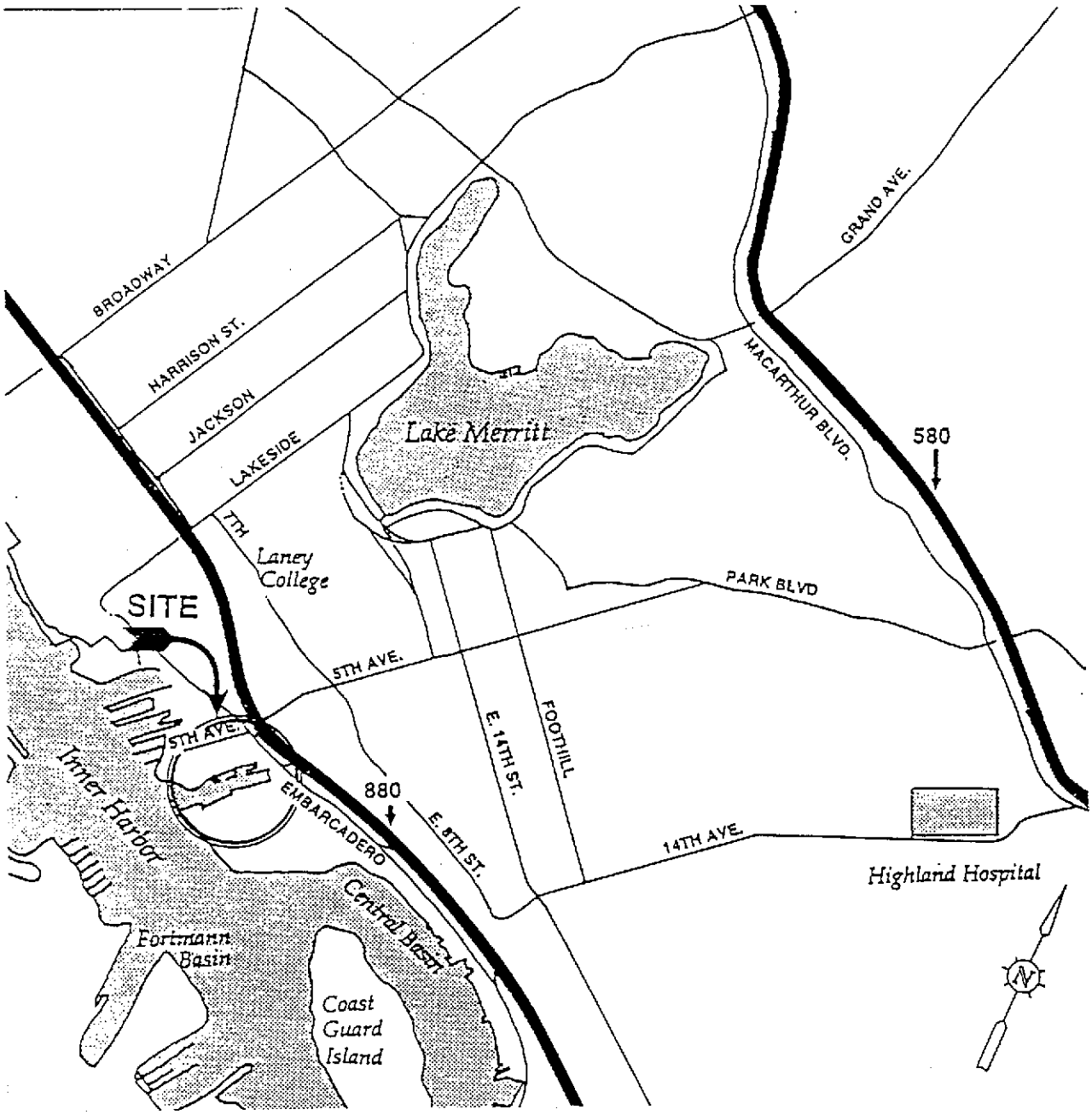
FP = Free product
TPH = Total petroleum hydrocarbons
NA = Not applicable
NM = Not measured
NS = Not sampled

ug/L = Micrograms per liter
y = Sample exhibits fuel pattern which does not resemble standard
l = lighter hydrocarbons than indicated standard
h = Heavier hydrocarbons than indicated standard
z = Sample exhibits unknown single peak or peaks

Notes:

a. Elevations are based on the Port of Oakland Datum. Elevations based on this special datum may be converted to the mean sea level datum by subtracting 3.20 feet. The top of casing elevation was resurveyed in May 1996. Groundwater elevations recorded during 1996 are calculated using the new top of casing elevation.

b. Laboratory analysis reporting limits are listed above if the reporting limits were previously reported in data provided to Subsurface Consultants, Inc.

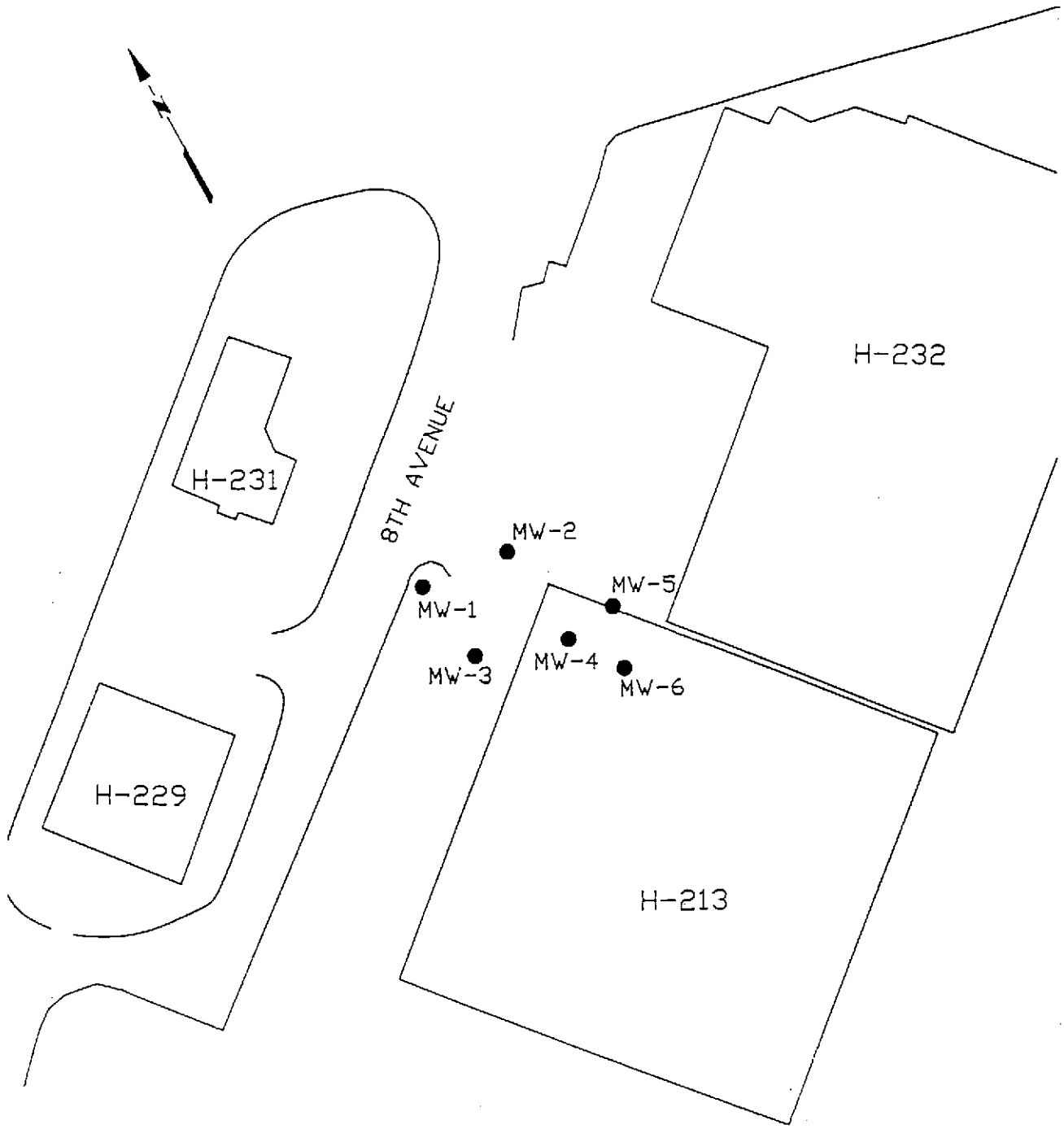


SITE VICINITY MAP

Subsurface Consultants

8TH AVENUE STUDY AREA–OAKLAND, CA

JOB NUMBER	DATE	APPROVED	PLATE
133.005	6/21/96	BP	1



MAP BASED ON FIGURE PREPARED BY
CLAYTON ENVIRONMENTAL CONSULTANTS

MONITORING WELL LOCATION

Subsurface Consultants

KEEP ON TRUCKING - OAKLAND, CA

JOB NUMBER	DATE	APPROVED
133.005	7/25/96	BD

PLATE 2

APPENDIX A

FREE PRODUCT REMOVAL AND SKIMMER OPERATIONS

APPENDIX A
FREE PRODUCT REMOVAL AND SKIMMER OPERATIONS

Keep on Trucking Facility (H-213)
Oakland, California
(SCI 133.005)

Date	Product Thickness (inches)	Product Volume Removed (gal)	Comments
Well MW-4			
4/17/95	--	0.20	Skimmer in place
4/18/95	--	0.10	Skimmer in place
4/26/95	--	0.30	Skimmer in place
5/12/95	--	0.01	Skimmer in place
5/16/95	None	None	Skimmer in place
6/12/95	None	None	Skimmer in place
6/22/95	None	None	Skimmer in place
7/14/95	None	None	Skimmer in place
7/19/95	None	None	Passive skimmer removed
7/28/95	0.5	0.01	Measured with Interface Probe
8/17/95	1.0	None	Measured with Interface Probe
8/23/95	0.8	None	Measured with Interface Probe
9/6/95	1.0	None	Measured with Interface Probe
9/28/95	0.8	0.004	Measured with Interface Probe
11/10/95	2.8	0.03	Measured with Interface Probe
12/18/95	1.8	0.02	Passive skimmer installed
1/10/96	--	0.03	Skimmer in place
2/20/96	3.3	0.03	Skimmer in place
5/23/96	None	0.01	Skimmer in place;Up to 1/4" of FP measured after bailing
6/28/96	0.00	0.02	Skimmer in place
7/29/96	0	0.00	Skimmer in place
9/3/96	Immeasurable amount	0.00	Skimmer in place
9/9/96	0.25	0.00	Skimmer in place
9/18/96	0.13	0.00	Skimmer in place
9/23/96	0.38	0.00	Skimmer in place
9/30/96	Immeasurable amount	0.00	Skimmer in place
Well MW-6			
7/24/95	--	--	
7/28/95	--	0.10	Passive skimmer installed
8/17/95	7.2	0.10	Skimmer in place
8/23/95	10.0	0.10	Skimmer in place
9/6/95	4.8	0.05	Skimmer in place
9/28/95	4.8	0.07	Removed skimmer vol. only
11/10/95	0.7	0.02	Skimmer in place
12/18/95	4.0	0.10	Skimmer in place
1/10/96	2.5	0.03	Skimmer in place
2/20/96	4.0	0.04	Skimmer in place
5/23/96	5.0	0.08	Skimmer in place
6/28/96	0.5	0.03	Skimmer in place
7/29/96	0.5	0.01	Skimmer in place
9/3/96	0.5	0.00	Skimmer in place
9/9/96	Immeasurable amount	0.00	Skimmer in place
9/18/96	Immeasurable amount	0.00	Skimmer in place
9/23/96	0.13	0.00	Skimmer in place
9/30/96	0.00	0.00	Skimmer in place

APPENDIX B

WATER SAMPLING FIELD SURVEY FORMS

WELL SAMPLING FORM

Project Name: KOT
Well Number: MW-1
Job No.: 133.005
Well Casing Diameter: 2 inch
Sampled By: DWA
Date: 9/4/96
TOC Elevation:
Weather: foggy

Depth to Casing Bottom (below TOC) 15.50 feet
Depth to Groundwater (below TOC) 5.37 feet
Feet of Water in Well 10.13 feet
Depth to Groundwater When 80% Recovered 7.40 feet
Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 1.7 gallons
Depth Measurement Method Tape & Paste / (Electronic Sounder) / Other
Free Product none
Purge Method disposable bailer

slow recharge rate = 1" per min.

FIELD MEASUREMENTS

Gallons Removed	pH	Temp (°F)	Conductivity (micromhos/cm)	Salinity S%	Comments
1	7.18	66.9	1430		clear/no odor
2	6.80	67.1	1950		
3	6.87	66.8	2050		
4	7.04	65.7	2090		
5	7.25	66.1	2000		Dry @ 5 gals.

Total Gallons Purged 5 gallons
Depth to Groundwater Before Sampling (below TOC) 7.42' on 9/6/96 @ 0850 feet
Sampling Method disposable bailer
Containers Used 3 (40 ml) 1 (liter) (pint)

Subsurface Consultants

JOB NUMBER DATE APPROVED PLATE

WELL SAMPLING FORM

Project Name: KOT
Well Number: MW-2
Job No.: 133.005
Well Casing Diameter: 2 inches
Sampled By: DWA
Date: 9/4/96
TOC Elevation:
Weather: foggy
Depth to Casing Bottom (below TOC) 15.50 feet
Depth to Groundwater Before Purging (below TOC) 3.98 feet
Feet of Water in Well 11.52 feet
Depth to Groundwater When 80% Recovered 6.28 feet
Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 1.9 gallons
Depth Measurement Method Tape & Paste / (Electronic Sounder) / Other
Free Product none
Purge Method disposable bailer

slow recharge rate = 1" per min.

FIELD MEASUREMENTS

Gallons Removed	Time	pH	Temp (°C / (F))	Conductivity (micromhos/cm)	Salinity S%	Comments
0		7.78	69.7	1540		clear/no odor
2		7.21	67.7	1670		semi-clear
4		6.97	65.6	1830		murky
~~5~~		7.33	64.2	1670		dry @ 5 gals.

Total Gallons Purged ~~5~~ gallons
Depth to Groundwater Before Sampling (below TOC) 4.17 on 9/5/96 feet
Sampling Method disposable bailer
Containers Used 3 (40 ml) / 1 (liter) / (pint)

DRUM STATUS

Number of drums at the site
Date and Content
Condition

Subsurface Consultants

JOB NUMBER | DATE | APPROVED | PLATE

WELL SAMPLING FORM

Project Name: KOT
Well Number: MW-3
Job No.: 133.005
Well Casing Diameter: 2 inches
Sampled By: DWA
Date: 9/3/96
TOC Elevation:
Weather: sunny
Depth to Casing Bottom (below TOC) 20.00 feet
Depth to Groundwater Before Purging (below TOC) 4.48 feet
Feet of Water in Well 15.52 feet
Depth to Groundwater When 80% Recovered 7.58 feet
Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 2.5 gallons
Depth Measurement Method Tape & Paste / (Electronic Sounder) / Other
Free Product none
Purge Method disposable bailer

very slow recharge (1 week +)

FIELD MEASUREMENTS

Gallons Removed	Time	pH	Temp (°C / (°F))	Conductivity (micromhos/cm)	Salinity S%	Comments
2		7.83	68.3	2640		clear/no odor
4		7.38	66.3	2560		murky
5		7.41	67.3	2440		dry @ 5gals.

Total Gallons Purged 5 gallons
Depth to Groundwater Before Sampling (below TOC) 6.42 on 9/18/96 @ 11:20 a.m. feet
Sampling Method disposable bailer
Containers Used 3 (40 ml) 1 (liter) (pint)

DRUM STATUS

Number of drums at the site 8
Date and Content
Condition Good

Subsurface Consultants

JOB NUMBER DATE APPROVED PLATE

WELL SAMPLING FORM

Project Name: KOT
Well Number: MW-4
Job No.: 133.005
Well Casing Diameter: 2 inches
Sampled By: DWA
Date: 9/4/96
TOC Elevation:
Weather: foggy
Depth to Casing Bottom (below TOC) 15.50 feet
Depth to Groundwater Before Purging (below TOC) 4.65 feet
Feet of Water in Well 10.85 feet
Depth to Groundwater When 80% Recovered 6.82 feet
Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 1.8 gallons
Depth Measurement Method (Tape & Paste) / Electronic Sounder / Other
Free Product ~~none~~ thin ring (1/64") of product in bailer - not measurable
Purge Method disposable bailer
~~thin ring~~ slow recharge

FIELD MEASUREMENTS

Gallons Removed	Time	pH	Temp (°C / °F)	Conductivity (micromhos/cm)	Salinity S‰	Comments
0		7.11	67.7	1100		clear w/ floating globs of product strong odor
2		7.37	70.7	1070		
4		7.05	69.7	1220		
6		7.09	67.2	1400		

Total Gallons Purged 6 gallons
Depth to Groundwater Before Sampling (below TOC) 4.73' feet
Sampling Method disposable bailer
Containers Used 3 (40 ml) 1 (liter) (pint)

DRUM STATUS

Number of drums at the site
Date and Content
Condition

Subsurface Consultants

JOB NUMBER DATE APPROVED PLATE

WELL SAMPLING FORM

Project Name: KOT
Well Number: MW-5
Job No.: 133.005
Well Casing Diameter: 2 inches
Sampled By: DWA
Date: 9/4/96
TOC Elevation:
Weather: Foggy
Depth to Casing Bottom (below TOC) 19.50 feet
Depth to Groundwater Before Purging (below TOC) 5.44 feet
Feet of Water in Well 14.06 feet
Depth to Groundwater When 80% Recovered 8.25 feet
Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 2.3 gallons
Depth Measurement Method Tape & Paste / (Electronic Sounder) / Other
Free Product none
Purge Method disposable bailer
slow recharge

FIELD MEASUREMENTS

Gallons Removed	Time	pH	Temp (°C / °F)	Conductivity (micromhos/cm)	Salinity S%	Comments
1		8.09	65.7	1000		clear / strong oder w/ sheen
3		7.11	65.1	1300		
5		6.87	64.9	1500		
7		6.84	62.9	1650		

Total Gallons Purged 7 gallons
Depth to Groundwater Before Sampling (below TOC) 8.25' feet
Sampling Method disposable bailer
Containers Used 3 (40 ml) 1 (liter) (pint)

DRUM STATUS

Number of drums at the site
Date and Content
Condition

Subsurface Consultants

JOB NUMBER DATE APPROVED

PLATE

WELL SAMPLING FORM

Project Name: KOT
Well Number: MW-6
Job No.: 133.005
Well Casing Diameter: 2 inches
Sampled By: DWA
Date: 9/4/96
TOC Elevation:
Weather: Sunny
Depth to Casing Bottom (below TOC) 20.50 feet
Depth to Groundwater Before Purging (below TOC) 5.19 feet
Feet of Water in Well 15.31 feet
Depth to Groundwater When 80% Recovered 8.25 feet
Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 2.5 gallons
Depth Measurement Method (Tape & Paste) / (Electronic Sounder) / Other
Free Product
Purge Method disposable bailer
slow recharge

FIELD MEASUREMENTS

Gallons Removed	Time	pH	Temp (°C °F)	Conductivity (micromhos/cm)	Salinity S%	Comments
2		7.40	71.1	1480		
4		7.40	70.5	1800		
6		7.06	68.9	1710		
8		7.10	68.0	1890		

Total Gallons Purged 8 gallons
Depth to Groundwater Before Sampling (below TOC) 4.26 on 9/5/96 feet
Sampling Method disposable bailer
Containers Used 5 (40 ml) 5 (liter) (pint)

DRUM STATUS

Number of drums at the site
Date and Content
Condition

Subsurface Consultants

JOB NUMBER | DATE | APPROVED | PLATE

APPENDIX C

GROUNDWATER SAMPLING ANALYTICAL REPORTS FOR SAMPLES COLLECTED IN SEPTEMBER 1996

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Lafayette, CA 94549

Date: 23-SEP-96
Lab Job Number: 126759
Project ID: 133.005
Location: KOT

Reviewed by: _____

Reviewed by: _____

Curtis & Tompkins, Ltd.

Client: Subsurface Consultants

Laboratory Login Number: 126759

Project Name: KOT
Project Number: 133.005

Report Date: 23 September 96

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD: SMWW 17:5520BF**

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
126759-002	SCI-MW-1	Water	06-SEP-96	06-SEP-96	18-SEP-96	ND	mg/L	5	TR	29899
126759-003	SCI-MW-7	Water	06-SEP-96	06-SEP-96	18-SEP-96	ND	mg/L	5	TR	29899
126759-004	SCI-MW-18	Water	06-SEP-96	06-SEP-96	18-SEP-96	ND	mg/L	5	TR	29899

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

QC Batch Report

Client: Subsurface Consultants
Project Name: KOT
Project Number: 133.005

Laboratory Login Number: 126759
Report Date: 23 September 96

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **QC Batch Number: 29899**

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	5	mg/L	SMWW 17:5520BF	18-SEP-96

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	84%	SMWW 17:5520BF	18-SEP-96
BSD	87%	SMWW 17:5520BF	18-SEP-96

		Control Limits
Average Spike Recovery	86%	80% - 120%
Relative Percent Difference	3.5%	< 20%

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126759-001	MW-1	29639	09/06/96	09/07/96	09/07/96	

Matrix: Water

Analyte Diln Fac:	Units	126759-001 1
Gasoline	ug/L	<50
Surrogate		
Trifluorotoluene	%REC	95
Bromobenzene	%REC	85

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126759-002	SCI-MW-1	29741	09/06/96	09/11/96	09/11/96	
126759-003	SCI-MW-7	29741	09/06/96	09/12/96	09/12/96	
126759-004	SCI-MW-18	29741	09/06/96	09/11/96	09/11/96	

Matrix: Water

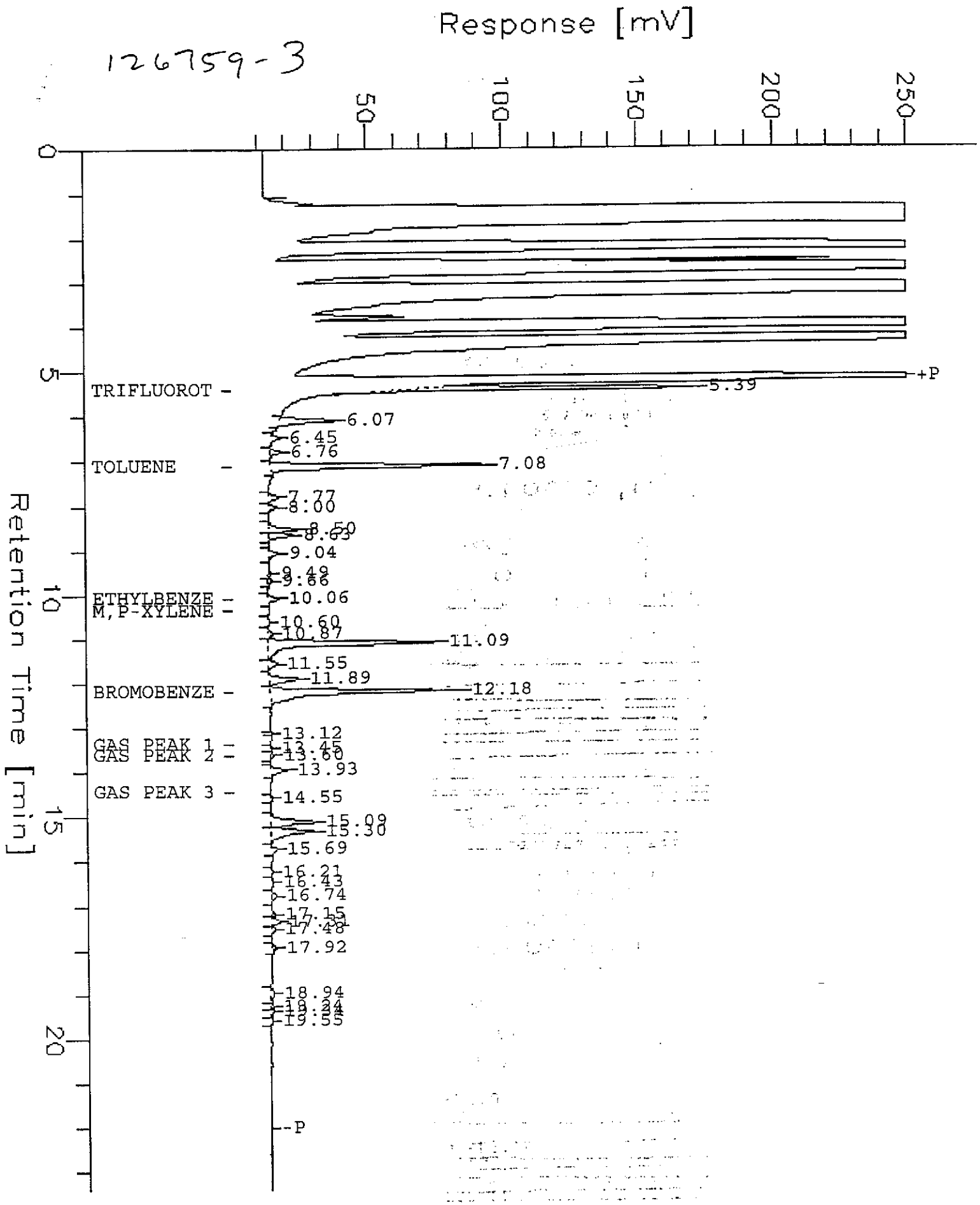
Analyte Diln Fac:	Units	126759-002 1	126759-003 1	126759-004 1
Gasoline	ug/L	<50	540	<50
Surrogate				
Trifluorotoluene	%REC	102	96	101
Bromobenzene	%REC	89	105	90

TVH2 - GC-05 RTX-1

FileName : G:\GC05\255H019.raw
Start Time : 0.00 min End Time : 23.42 min
Scale Factor: -1 Plot Offset: 0 mV

Date : 9/12/96 1:11 AM
Low Point : 0.00 mV
Plot Scale: 250 mV

High Point : 250.00 mV



Curtis & Tompkins, Ltd.

Lab #: 126759 BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 29639
Units: ug/L
Diln Fac: 1

Prep Date: 09/06/96
Analysis Date: 09/06/96

MB Lab ID: QC29799

Analyte	Result	
Gasoline	<50	
Surrogate	**%Rec**	**Recovery Limits**
Trifluorotoluene	100	69-120
Bromobenzene	79	70-122

Curtis & Tompkins, Ltd.

Lab #: 126759 BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 29639
Units: ug/L
Diln Fac: 1

Prep Date: 09/06/96
Analysis Date: 09/06/96

LCS Lab ID: QC29800

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	2007	2000	100	80-120

Surrogate	%Rec	Limits
Trifluorotoluene	96	69-120
Bromobenzene	103	70-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

Curtis & Tompkins, Ltd.

Lab #: 126759 BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 126718-001
Matrix: Water
Batch#: 29639
Units: ug/L
Diln Fac: 1

Sample Date: 08/28/96
Received Date: 08/31/96
Prep Date: 09/06/96
Analysis Date: 09/06/96

MS Lab ID: QC29802

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	2000	62.6	1921	93	75-125
Surrogate	**%Rec**	**Limits**			
Trifluorotoluene	96	69-120			
Bromobenzene	104	70-122			

MSD Lab ID: QC29803

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	2000	1973	96	75-125	3	20
Surrogate	**%Rec**	**Limits**				
Trifluorotoluene	96	69-120				
Bromobenzene	105	70-122				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

Curtis & Tompkins, Ltd.

Lab #: 126759

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 29741
Units: ug/L
Diln Fac: 1

Prep Date: 09/11/96
Analysis Date: 09/11/96

MB Lab ID: QC30172

Analyte	Result	
Gasoline	<50	
Surrogate	**%Rec**	**Recovery Limits**
Trifluorotoluene	97	65-135
Bromobenzene	81	65-135

Curtis & Tompkins, Ltd.

Lab #: 126759 BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 29741
Units: ug/L
Diln Fac: 1

Prep Date: 09/11/96
Analysis Date: 09/11/96

LCS Lab ID: QC30173

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	1887	2000	94	75-125
Surrogate	**%Rec**	**Limits**		
Trifluorotoluene	95	65-135		
Bromobenzene	104	65-135		

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

Curtis & Tompkins, Ltd.

Lab #: 126759 BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 126744-011
Matrix: Water
Batch#: 29741
Units: ug/L
Diln Fac: 1

Sample Date: 09/03/96
Received Date: 09/05/96
Prep Date: 09/11/96
Analysis Date: 09/11/96

MS Lab ID: QC30174

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	2000	<50	1867	93	75-125
Surrogate	**%Rec**	**Limits**			
Trifluorotoluene	97	65-135			
Bromobenzene	110	65-135			

MSD Lab ID: QC30175

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	2000	1959	98	75-125	5	35
Surrogate	**%Rec**	**Limits**				
Trifluorotoluene	98	65-135				
Bromobenzene	111	65-135				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126759-001	MW-1	29815	09/06/96	09/13/96	09/17/96	
126759-002	SCI-MW-1	29815	09/06/96	09/13/96	09/17/96	
126759-003	SCI-MW-7	29815	09/06/96	09/13/96	09/17/96	
126759-004	SCI-MW-18	29815	09/06/96	09/13/96	09/17/96	

Matrix: Water

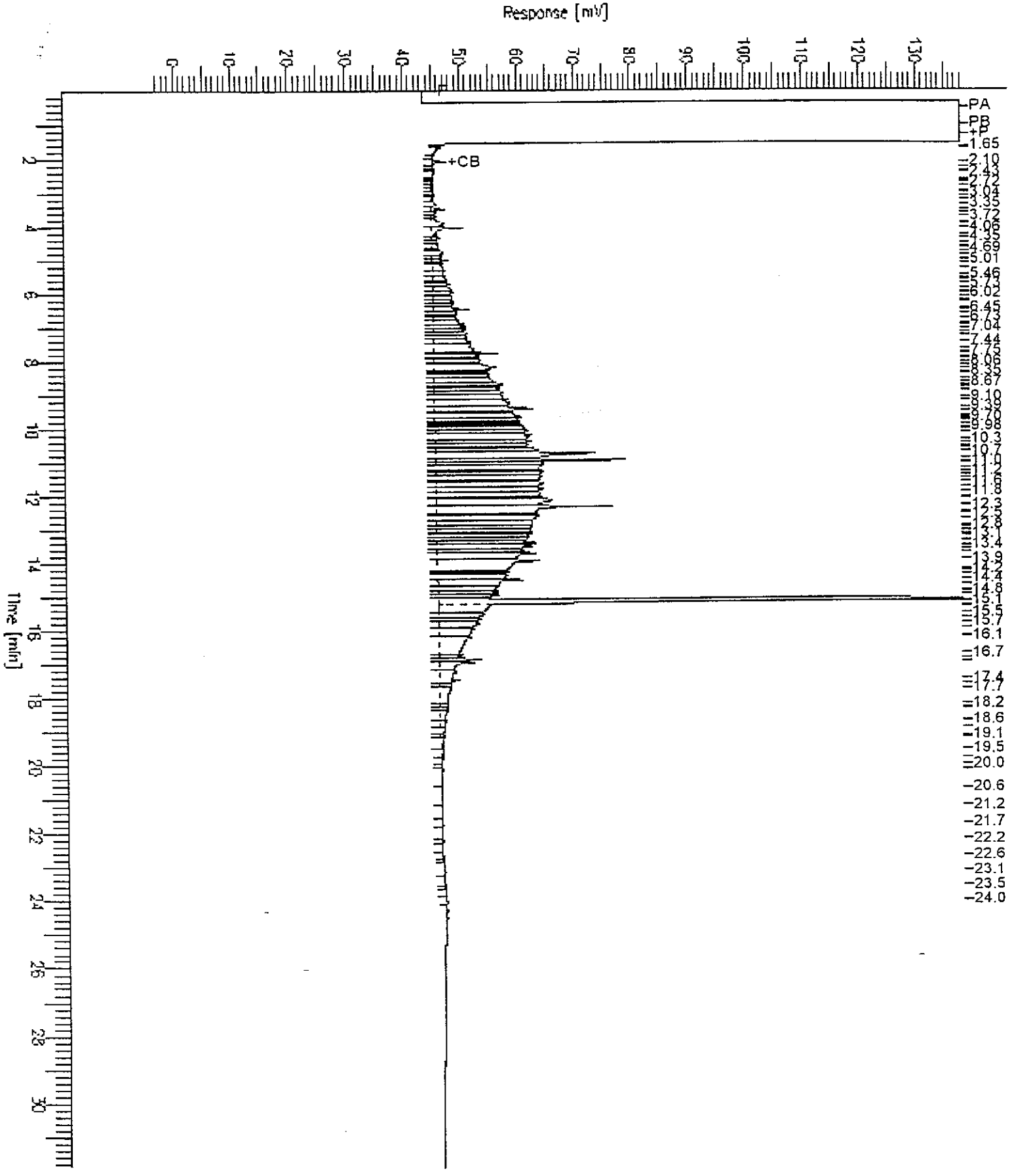
Analyte Diln Fac:	Units	126759-001 1	126759-002 1	126759-003 1	126759-004 1
Diesel C12-C22	ug/L	850 YH	870 YH	6100 Y	2200 YH
Motor Oil C22-C50	ug/L	490 YL	<250	1900 YL	1600 YL
Surrogate					
Hexacosane	%REC	102	108	104	98

Y: Sample exhibits fuel pattern which does not resemble standard
H: Heavier hydrocarbons than indicated standard
L: Lighter hydrocarbons than indicated standard

GC15 Channel A TEH

Sample Name : W,126759-001
FileName : G:\GC15\CHB\260B028.RAW
Method : 241TEH.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: -3 mV

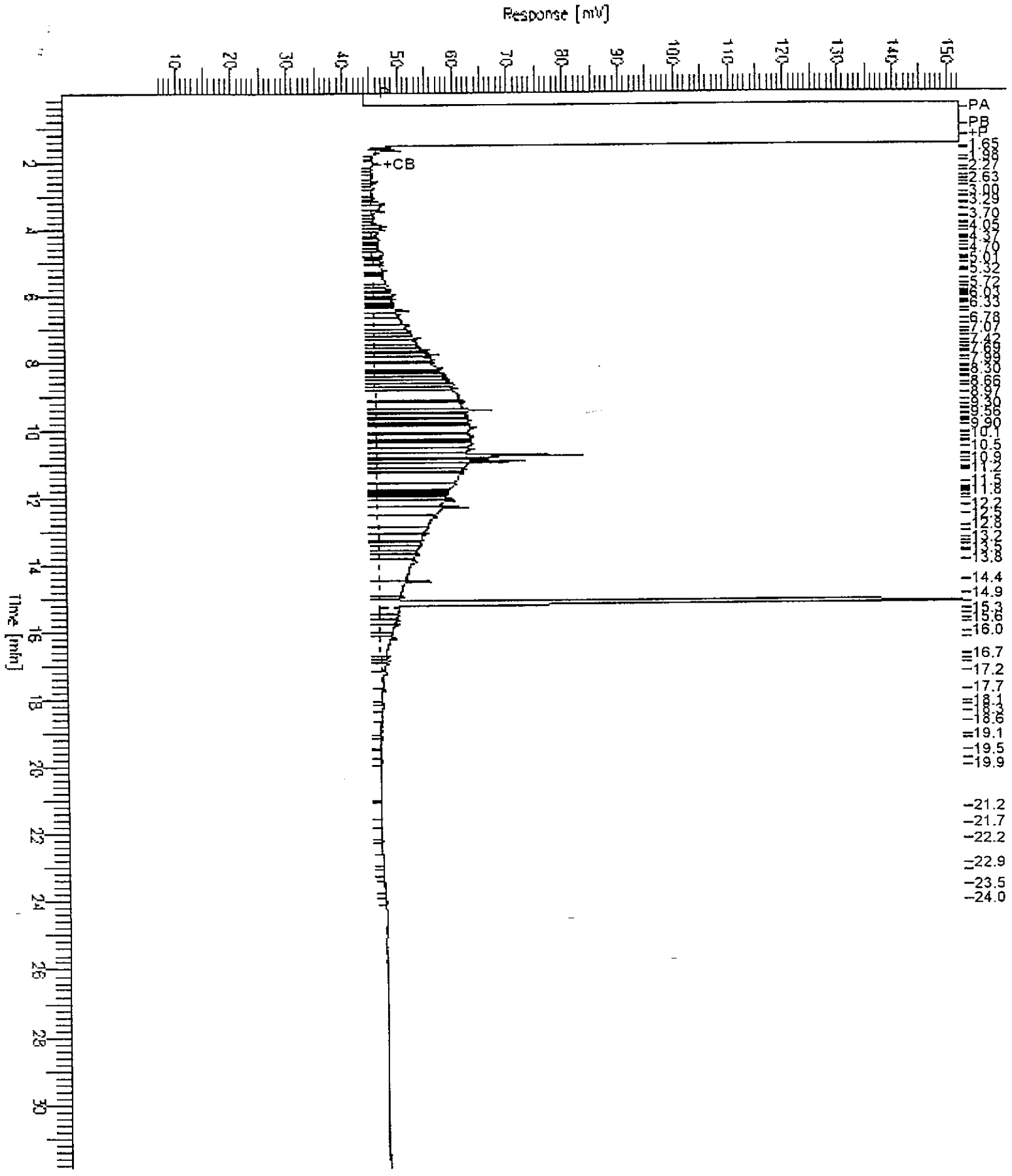
Sample #: 29815 Page 1 of 1
Date : 9/17/96 10:09 AM
Time of Injection: 9/17/96 03:32 AM
Low Point : -3.48 mV High Point : 138.05 mV
Plot Scale: 141.5 mV



GC15 Channel A TEH

Sample Name : W,126759-002
FileName : G:\GC15\CHB\2608029.RAW
Method : 241TEH.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 6 mV

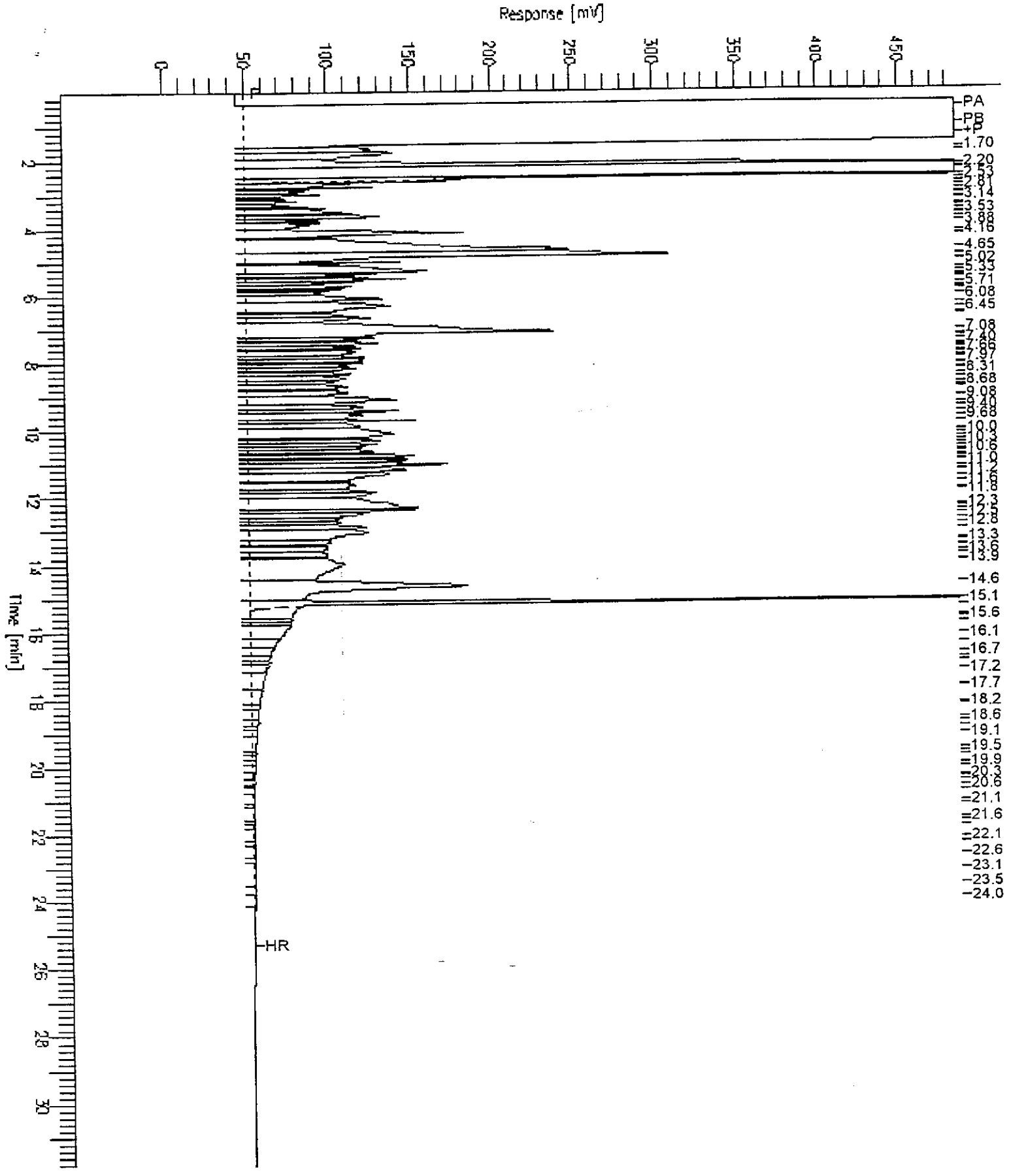
Sample #: 29815 Page 1 of 1
Date : 9/17/96 10:10 AM
Time of Injection: 9/17/96 04:16 AM
Low Point : 6.13 mV High Point : 152.24 mV
Plot Scale: 146.1 mV



GC15 Channel A TEH

Sample Name : W,126759-003
FileName : G:\GC15\CHB\260B030.RAW
Method : 241TEH.MTH
Start Time : 0.01 min End Time : 31.85 min
Scale Factor: 0.0 Plot Offset: -6 mV

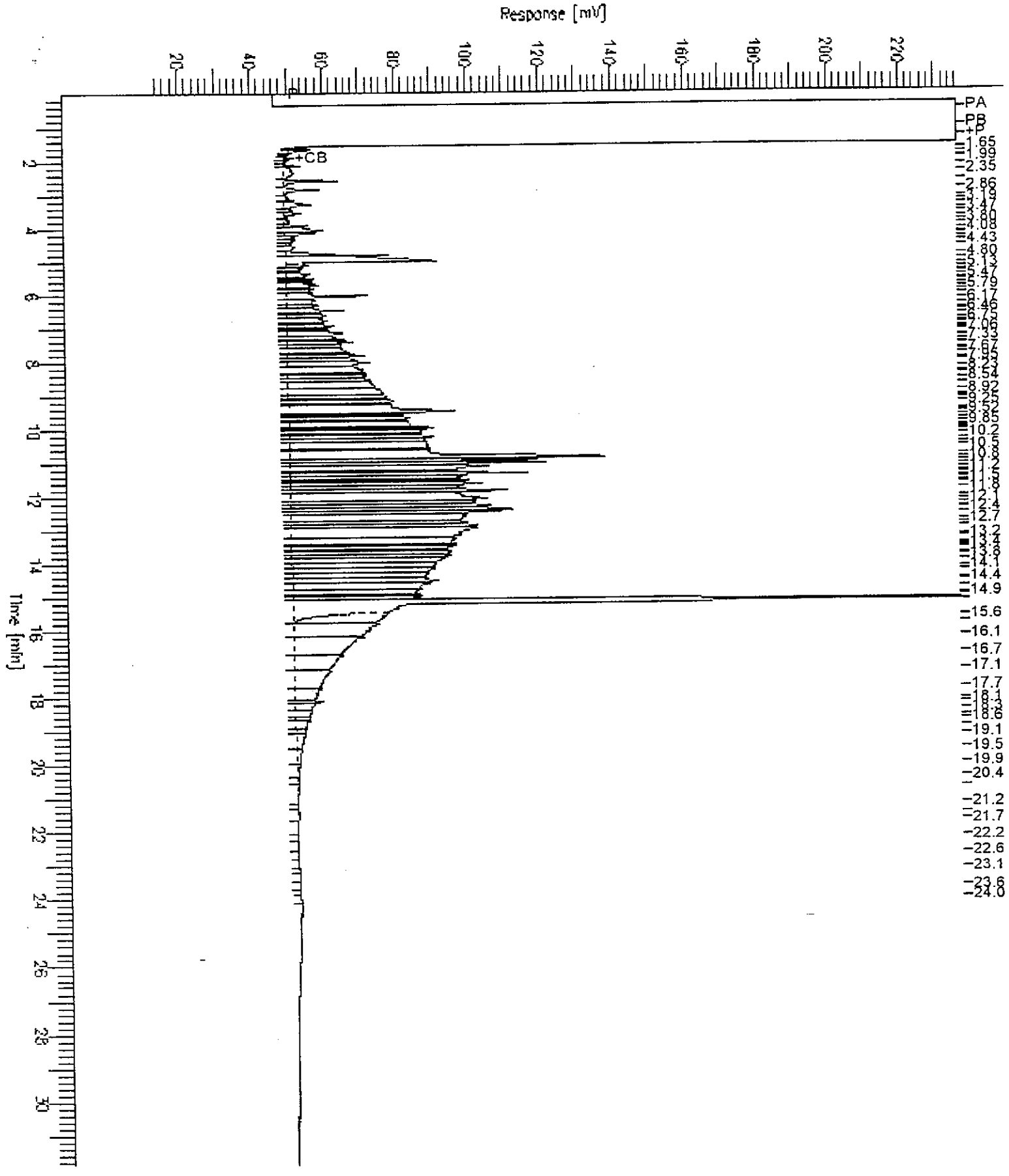
Sample #: 29815
Date : 9/17/96 10:15 AM
Time of Injection: 9/17/96 05:00 AM
Low Point : -6.42 mV High Point : 485.94 mV
Plot Scale: 492.4 mV



GC15 Channel A TEH

Sample Name : W,126759-004
FileName : G:\GC15\CHB\2608031.RAW
Method : 241TEH.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 13 mV

Sample #: 29815
Date : 9/17/96 10:17 AM
Time of Injection: 9/17/96 05:44 AM
Low Point : 13.41 mV High Point : 236.42 mV
Plot Scale: 223.0 mV



Curtis & Tompkins, Ltd.

Lab #: 126759 BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 29815
Units: ug/L
Diln Fac: 1

Prep Date: 09/13/96
Analysis Date: 09/16/96

MB Lab ID: QC30453

Analyte	Result
Diesel C12-C22	<50
Motor Oil C22-C50	<250

Surrogate	%Rec	Recovery Limits
Hexacosane	80	60-140

Curtis & Tompkins, Ltd.

Lab #: 126759

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 29815
Units: ug/L
Diln Fac: 1

Prep Date: 09/13/96
Analysis Date: 09/16/96

BS Lab ID: QC30454

Analyte	Spike Added	BS	%Rec #	Limits
Diesel C12-C22	2475	1612	65	60-140
Surrogate	%Rec	Limits		
Hexacosane	80	60-140		

BSD Lab ID: QC30455

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Diesel C12-C22	2475	1714	69	60-140	6	35
Surrogate	%Rec	Limits				
Hexacosane	86	60-140				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126759-001	MW-1	29639	09/06/96	09/07/96	09/07/96	

Matrix: Water

Analyte	Units	126759-001
Diln Fac:		1
Benzene	ug/L	<0.5
Toluene	ug/L	<0.5
Ethylbenzene	ug/L	<0.5
m,p-Xylenes	ug/L	<0.5
o-Xylene	ug/L	<0.5
Surrogate		
Trifluorotoluene	%REC	99
Bromobenzene	%REC	97

BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 29639
Units: ug/L
Diln Fac: 1

Prep Date: 09/06/96
Analysis Date: 09/06/96

MB Lab ID: QC29799

Analyte	Result
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylenes	<0.5
o-Xylene	<0.5

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	103	58-130
Bromobenzene	90	62-131

Curtis & Tompkins, Ltd.

Lab #: 126759

BATCH QC REPORT

BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 29639
Units: ug/L
Diln Fac: 1

Prep Date: 09/06/96
Analysis Date: 09/06/96

LCS Lab ID: QC29801

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	19.9	20	100	80-120
Toluene	18.3	20	92	80-120
Ethylbenzene	17.3	20	87	80-120
m,p-Xylenes	44.5	40	111	80-120
o-Xylene	18.8	20	94	80-120

Surrogate	%Rec	Limits
Trifluorotoluene	103	58-130
Bromobenzene	91	62-131

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

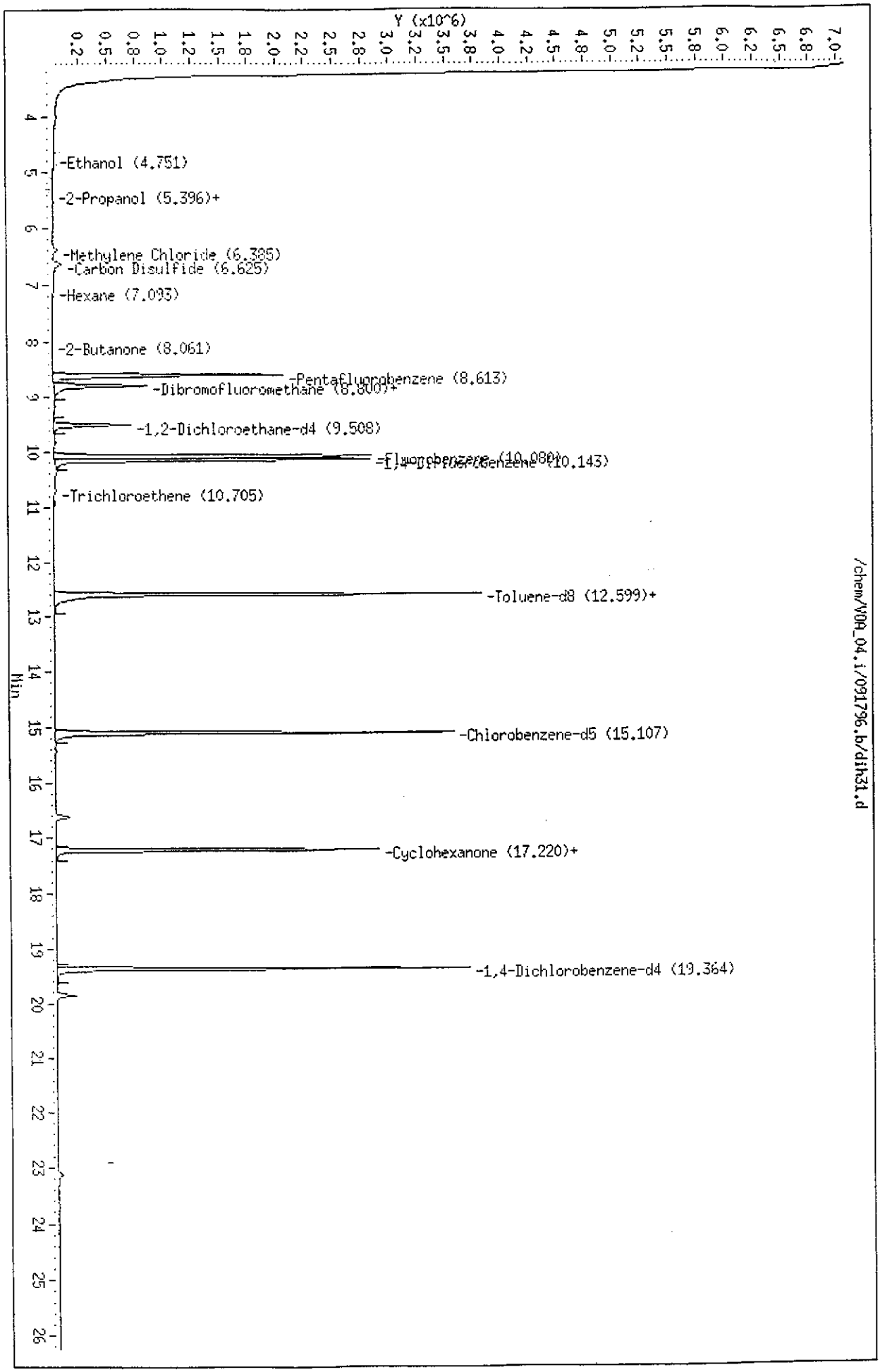
Field ID: SCI-MW-1
Lab ID: 126759-002
Matrix: Water
Batch#: 29862
Units: ug/L
Diln Fac: 1

Sampled: 09/06/96
Received: 09/06/96
Extracted: 09/18/96
Analyzed: 09/18/96

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	97	68-126
Toluene-d8	104	87-125
Bromofluorobenzene	106	79-122

126759-2


Data File: /chem/VOA_04.i/091796.b/dih31.d
Date : 18-SEP-96 00:33
Client ID: DYNA F&T
Sample Info: S,126759-002
Purge Volume: 5.0
Column phase: RTx Volatiles
Instrument: VOA_04.i
Operator: LLH
Column diameter: 0.32
/chem/VOA_04.i/091796.b/dih31.d
Y (x10^6)
Min
-Ethanol (4.751)
-2-Propanol (5.396)+
-Methylene Chloride (6.385)
-Carbon Disulfide (6.625)
-Hexane (7.093)
-2-Butanone (8.061)
-Pentafluorobenzene (8.613)
-Dibromofluoromethane (8.807)+
-1,2-Dichloroethane-d4 (9.508)
-Fluorobenzene (10.080)
-1,4-Difluorobenzene (10.143)
-Trichloroethene (10.705)
-Toluene-d8 (12.599)+
-Chlorobenzene-d5 (15.107)
-Cyclohexanone (17.220)+
-1,4-Dichlorobenzene-d4 (19.364)

Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

Field ID: SCI-MW-7
Lab ID: 126759-003
Matrix: Water
Batch#: 29895
Units: ug/L
Diln Fac: 250

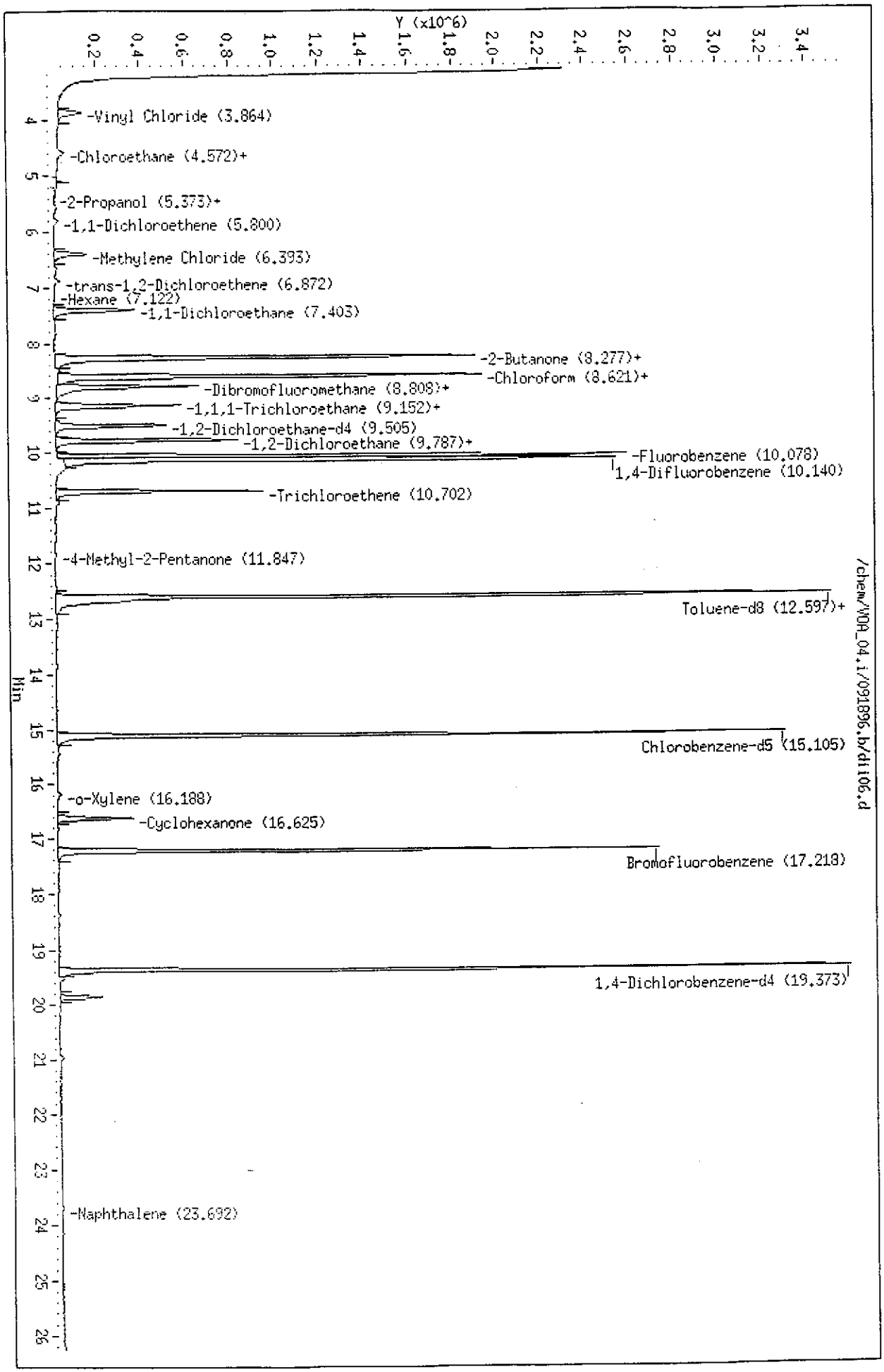
Sampled: 09/06/96
Received: 09/06/96
Extracted: 09/18/96
Analyzed: 09/18/96

Analyte	Result	Reporting Limit
Chloromethane	ND	2500
Bromomethane	ND	2500
Vinyl Chloride	8900	2500
Chloroethane	2400 J	2500
Methylene Chloride	ND	5000
Acetone	ND	5000
Carbon Disulfide	ND	1300
Trichlorofluoromethane	ND	1300
1,1-Dichloroethene	ND	1300
1,1-Dichloroethane	8100	1300
trans-1,2-Dichloroethene	ND	1300
cis-1,2-Dichloroethene	27000	1300
Chloroform	ND	1300
Freon 113	ND	1300
1,2-Dichloroethane	ND	1300
2-Butanone	ND	2500
1,1,1-Trichloroethane	10000	1300
Carbon Tetrachloride	ND	1300
Vinyl Acetate	ND	13000
Bromodichloromethane	ND	1300
1,2-Dichloropropane	ND	1300
cis-1,3-Dichloropropene	ND	1300
Trichloroethene	7900	1300
Dibromochloromethane	ND	1300
1,1,2-Trichloroethane	ND	1300
Benzene	5300	1300
trans-1,3-Dichloropropene	ND	1300
Bromoform	ND	1300
2-Hexanone	ND	2500
4-Methyl-2-Pentanone	ND	2500
1,1,2,2-Tetrachloroethane	ND	1300
Tetrachloroethene	ND	1300
Toluene	ND	1300
Chlorobenzene	ND	1300
Ethylbenzene	ND	1300
Styrene	ND	1300
m,p-Xylenes	ND	1300
o-Xylene	ND	1300

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	80	68-126
Toluene-d8	105	87-125
Bromofluorobenzene	103	79-122

J: Estimated Value

126759-3



Data File: /chem/VOA_04.i/091896.b/di06.d
Date : 18-SEP-96 11:37
Client ID: DYNA P&T
Sample Info: S,126759-003
Purge Volume: 5.0
Column phase: RTx Volatiles

Instrument: VOA_04.i
Operator: LLH
Column diameter: 0.32

Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

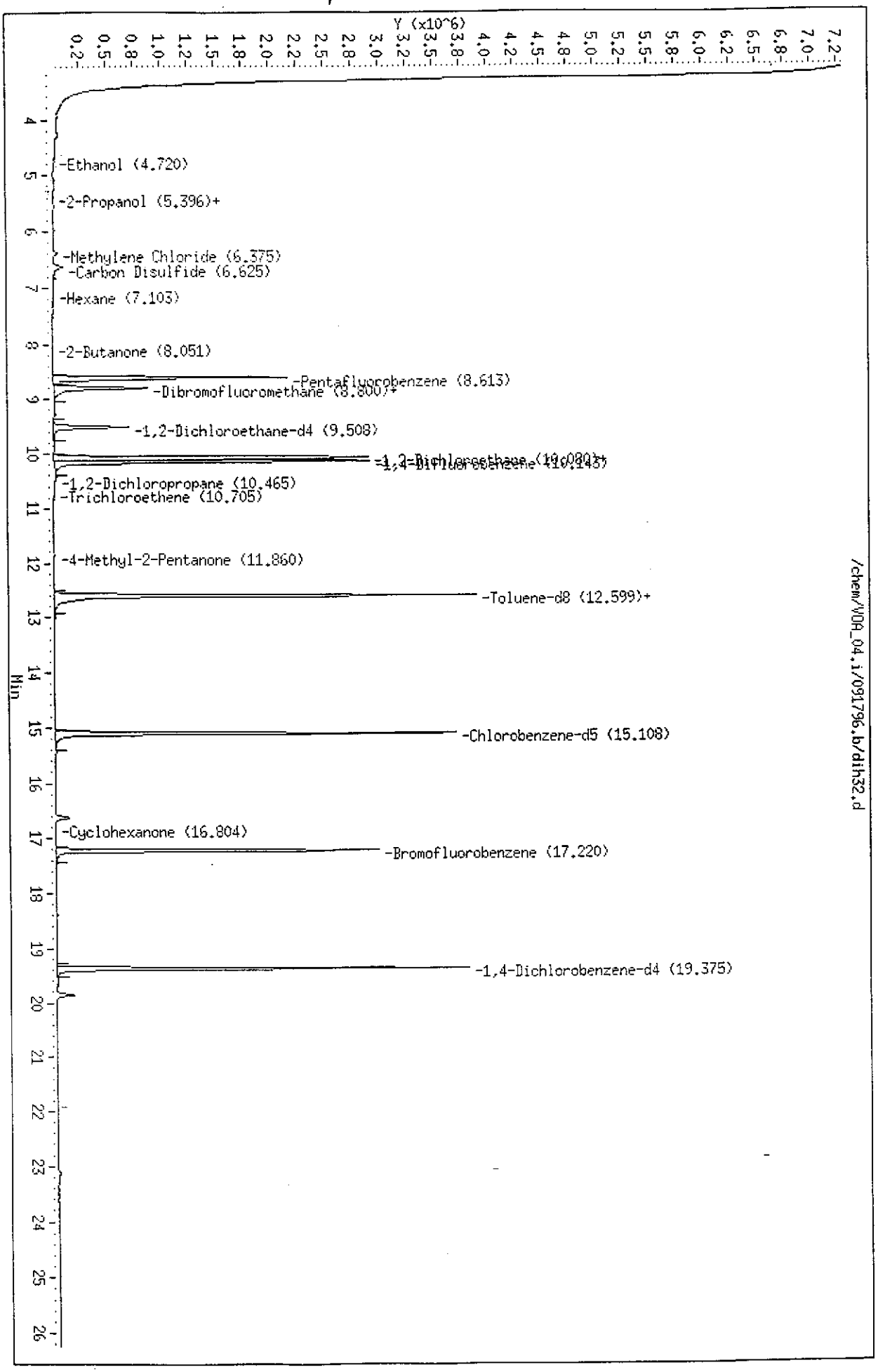
Field ID: SCI-MW-18
Lab ID: 126759-004
Matrix: Water
Batch#: 29862
Units: ug/L
Diln Fac: 1

Sampled: 09/06/96
Received: 09/06/96
Extracted: 09/18/96
Analyzed: 09/18/96

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	97	68-126
Toluene-d8	103	87-125
Bromofluorobenzene	106	79-122

126759-4


Data File: /chem/VOA_04.i/091796.b/dih32.d
Date : 18-SEP-96 01:04
Client ID: DYNA P&T
Sample Info: S,126759-004
Purge Volume: 5.0
Column phase: RTx Volatiles
Instrument: VOA_04.i
Operator: LLH
Column diameter: 0.32
/chem/VOA_04.i/091796.b/dih32.d
Y (x10^6)
Min
-Ethanol (4.720)
-2-Propanol (5.396)+
-Methylene Chloride (6.375)
-Carbon Disulfide (6.625)
-Hexane (7.103)
-2-Butanone (8.051)
-Pentafluorobenzene (8.613)
-Dibromofluoromethane (8.800)+
-1,2-Dichloroethane-d4 (9.508)
-1,2-Dichloroethane (10.080)+
-1,4-Difluorobenzene (10.145)
-1,2-Dichloropropane (10.465)
-Trichloroethene (10.705)
-4-Methyl-2-Pentanone (11.860)
-Toluene-d8 (12.599)+
-Chlorobenzene-d5 (15.108)
-Cyclohexanone (16.804)
-Bromofluorobenzene (17.220)
-1,4-Dichlorobenzene-d4 (19.375)

Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

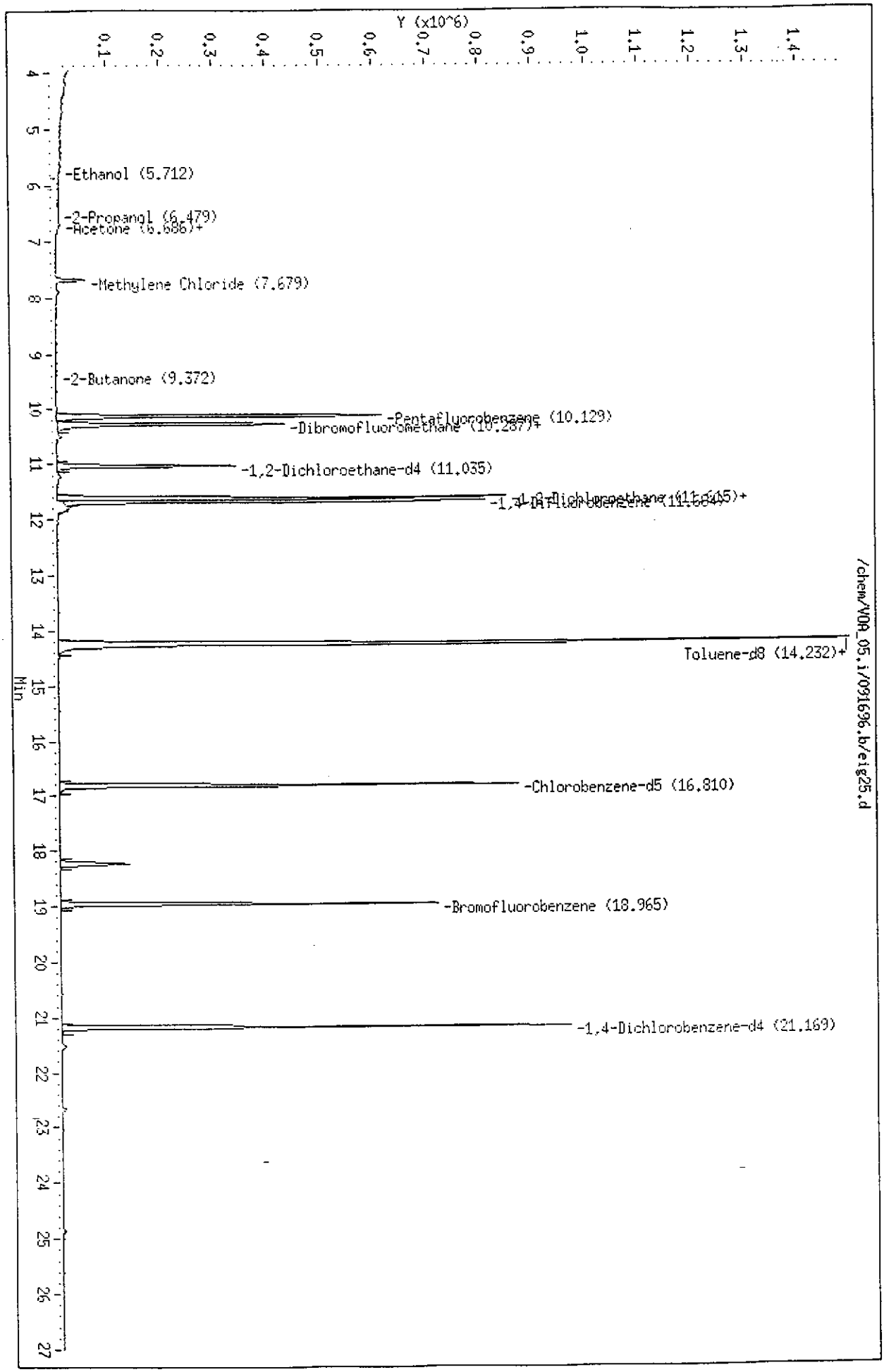
Field ID: TRIP BLANK #9
Lab ID: 126759-005
Matrix: Water
Batch#: 29823
Units: ug/L
Diln Fac: 1

Sampled: 09/06/96
Received: 09/06/96
Extracted: 09/16/96
Analyzed: 09/16/96

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	87	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	89	79-122

126759-5



Data File: /chem/VOA_05.i/091696.b/eig25.d
Date : 16-SEP-1996 21:47
Client ID: DYNA PaT
Sample Info: S,126759-005
Purge Volume: 5.0
Column phase: RTx Volatiles

Instrument: VOA_05.i
Operator: DN
Column diameter: 0.32

Curtis & Tompkins, Ltd.

Lab #: 126759 BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 29823
Units: ug/L
Diln Fac: 1

Prep Date: 09/16/96
Analysis Date: 09/16/96

MB Lab ID: QC30477

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	86	68-126
Toluene-d8	96	87-125
Bromofluorobenzene	88	79-122

Curtis & Tompkins, Ltd.

Lab #: 126759 BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 29862
Units: ug/L
Diln Fac: 1

Prep Date: 09/17/96
Analysis Date: 09/17/96

MB Lab ID: QC30644

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	96	68-126
Toluene-d8	102	87-125
Bromofluorobenzene	105	79-122

Curtis & Tompkins, Ltd.

Lab #: 126759 BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 29895
Units: ug/L
Diln Fac: 1

Prep Date: 09/18/96
Analysis Date: 09/18/96

MB Lab ID: QC30752

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	95	68-126
Toluene-d8	102	87-125
Bromofluorobenzene	105	79-122

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 29823
Units: ug/L
Diln Fac: 1

Prep Date: 09/16/96
Analysis Date: 09/16/96

LCS Lab ID: QC30471

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	50.48	50	101	51-180
Trichloroethene	47.42	50	95	73-141
Benzene	49.55	50	99	78-142
Toluene	47.56	50	95	76-150
Chlorobenzene	50.23	50	100	83-129

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	86	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	90	79-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

Curtis & Tompkins, Ltd.

Lab #: 126759 BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 29862
Units: ug/L
Diln Fac: 1

Prep Date: 09/17/96
Analysis Date: 09/17/96

LCS Lab ID: QC30632

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	58.99	50	118	51-180
Trichloroethene	52.42	50	105	73-141
Benzene	57.08	50	114	78-142
Toluene	56.51	50	113	76-150
Chlorobenzene	55.63	50	111	83-129

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	101	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	103	79-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 29895
Units: ug/L
Diln Fac: 1

Prep Date: 09/18/96
Analysis Date: 09/18/96

LCS Lab ID: QC30751

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	54.41	50	109	51-180
Trichloroethene	52.12	50	104	73-141
Benzene	57.61	50	115	78-142
Toluene	57.44	50	115	76-150
Chlorobenzene	57.05	50	114	83-129

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	94	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	103	79-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 126825-073
Matrix: Soil
Batch#: 29823
Units: ug/Kg
Diln Fac: 25

Sample Date: 09/12/96
Received Date: 09/12/96
Prep Date: 09/16/96
Analysis Date: 09/16/96

MS Lab ID: QC30474

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	1250	<125	1292	103	51-180
Trichloroethene	1250	281.7	1695	95	73-141
Benzene	1250	0	1268	101	78-142
Toluene	1250	0	1202	96	76-150
Chlorobenzene	1250	<125	1272	102	83-129

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	78	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	94	79-122

MSD Lab ID: QC30475

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	1250	1239	99	51-180	4	14
Trichloroethene	1250	1687	95	73-141	0	14
Benzene	1250	1255	100	78-142	1	11
Toluene	1250	1195	96	76-150	1	13
Chlorobenzene	1250	1270	102	83-129	0	13

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	78	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	93	79-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

Curtis & Tompkins, Ltd.

Lab #: 126759 BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 126847-005
Matrix: Water
Batch#: 29862
Units: ug/L
Diln Fac: 1

Sample Date: 09/16/96
Received Date: 09/16/96
Prep Date: 09/17/96
Analysis Date: 09/17/96

MS Lab ID: QC30645

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5	49.74	100	51-180
Trichloroethene	50	9.798	57.38	95	73-141
Benzene	50	<5	53.32	107	78-142
Toluene	50	<5	54.87	110	76-150
Chlorobenzene	50	<5	53.56	107	83-129

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	94	68-126
Toluene-d8	102	87-125
Bromofluorobenzene	103	79-122

MSD Lab ID: QC30646

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	52.46	105	51-180	5	14
Trichloroethene	50	59.32	99	73-141	3	14
Benzene	50	55.72	111	78-142	4	11
Toluene	50	55.19	110	76-150	1	13
Chlorobenzene	50	53.84	108	83-129	1	13

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	98	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	103	79-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

Curtis & Tompkins, Ltd.

Lab #: 126759 BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 126838-003
Matrix: Water
Batch#: 29895
Units: ug/L
Diln Fac: 1

Sample Date: 09/12/96
Received Date: 09/13/96
Prep Date: 09/18/96
Analysis Date: 09/18/96

MS Lab ID: QC30753

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	0	42.62	85	51-180
Trichloroethene	50	30.44	74.4	88	73-141
Benzene	50	0	51.71	103	78-142
Toluene	50	0.2593	53.66	107	76-150
Chlorobenzene	50	0	51.81	104	83-129

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	90	68-126
Toluene-d8	104	87-125
Bromofluorobenzene	103	79-122

MSD Lab ID: QC30754

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	44.46	89	51-180	4	14
Trichloroethene	50	73.99	87	73-141	1	14
Benzene	50	51.77	104	78-142	0	11
Toluene	50	52.11	104	76-150	3	13
Chlorobenzene	50	51.37	103	83-129	1	13

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	92	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	104	79-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

Field ID: SCI-MW-1
Lab ID: 126759-002
Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Sampled: 09/06/96
Received: 09/06/96
Extracted: 09/09/96
Analyzed: 09/13/96

Analyte	Result	Reporting Limit
Phenol	ND	9.4
2-Chlorophenol	ND	9.4
Benzyl alcohol	ND	9.4
2-Methylphenol	ND	9.4
4-Methylphenol	ND	9.4
2-Nitrophenol	ND	47
2,4-Dimethylphenol	ND	9.4
Benzoic acid	ND	47
2,4-Dichlorophenol	ND	9.4
4-Chloro-3-methylphenol	ND	9.4
2,4,6-Trichlorophenol	ND	9.4
2,4,5-Trichlorophenol	ND	47
2,4-Dinitrophenol	ND	47
4-Nitrophenol	ND	47
4,6-Dinitro-2-methylphenol	ND	47
Pentachlorophenol	ND	47
N-Nitrosodimethylamine	ND	9.4
Aniline	ND	9.4
bis(2-Chloroethyl)ether	ND	9.4
1,3-Dichlorobenzene	ND	9.4
1,4-Dichlorobenzene	ND	9.4
1,2-Dichlorobenzene	ND	9.4
bis(2-Chloroisopropyl) ether	ND	9.4
N-Nitroso-di-n-propylamine	ND	9.4
Hexachloroethane	ND	9.4
Nitrobenzene	ND	9.4
Isophorone	ND	9.4
bis(2-Chloroethoxy)methane	ND	9.4
1,2,4-Trichlorobenzene	ND	9.4
Naphthalene	ND	9.4
4-Chloroaniline	ND	9.4
Hexachlorobutadiene	ND	9.4
2-Methylnaphthalene	ND	9.4
Hexachlorocyclopentadiene	ND	9.4
2-Chloronaphthalene	ND	47
2-Nitroaniline	ND	9.4
Dimethylphthalate	ND	9.4
Acenaphthylene	ND	

Semivolatile Organics by GC/MS

Field ID: SCI-MW-1
Lab ID: 126759-002
Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Sampled: 09/06/96
Received: 09/06/96
Extracted: 09/09/96
Analyzed: 09/13/96

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	9.4
3-Nitroaniline	ND	47
Acenaphthene	ND	9.4
Dibenzofuran	ND	9.4
2,4-Dinitrotoluene	ND	9.4
Diethylphthalate	ND	9.4
4-Chlorophenyl-phenylether	ND	9.4
Fluorene	ND	9.4
4-Nitroaniline	ND	47
N-Nitrosodiphenylamine	ND	9.4
Azobenzene	ND	9.4
4-Bromophenyl-phenylether	ND	9.4
Hexachlorobenzene	ND	9.4
Phenanthrene	ND	9.4
Anthracene	ND	9.4
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4
Pyrene	ND	9.4
Butylbenzylphthalate	ND	47
3,3'-Dichlorobenzidine	ND	9.4
Benzo(a)anthracene	ND	9.4
Chrysene	ND	9.4
bis(2-Ethylhexyl)phthalate	ND	9.4
Di-n-octylphthalate	ND	9.4
Benzo(b)fluoranthene	ND	9.4
Benzo(k)fluoranthene	ND	9.4
Benzo(a)pyrene	ND	9.4
Indeno(1,2,3-cd)pyrene	ND	9.4
Dibenz(a,h)anthracene	ND	9.4
Benzo(g,h,i)perylene	ND	9.4

Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	68	21-110
Phenol-d5	74	10-110
2,4,6-Tribromophenol	78	10-123
Nitrobenzene-d5	68	35-114
2-Fluorobiphenyl	65	43-116
Terphenyl-d14	46	33-141

Data File: /chem/bna02.i/091396x.b/12_6759-002.d
Report Date: 16-Sep-1996 17:01

Curtis & Tompkins Labs

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: CURTIS & TOMPKINS
Lab Smp Id: s,126759-002
Operator : dsh
Sample Location:
Sample Matrix: WATER
Analysis Type: SV

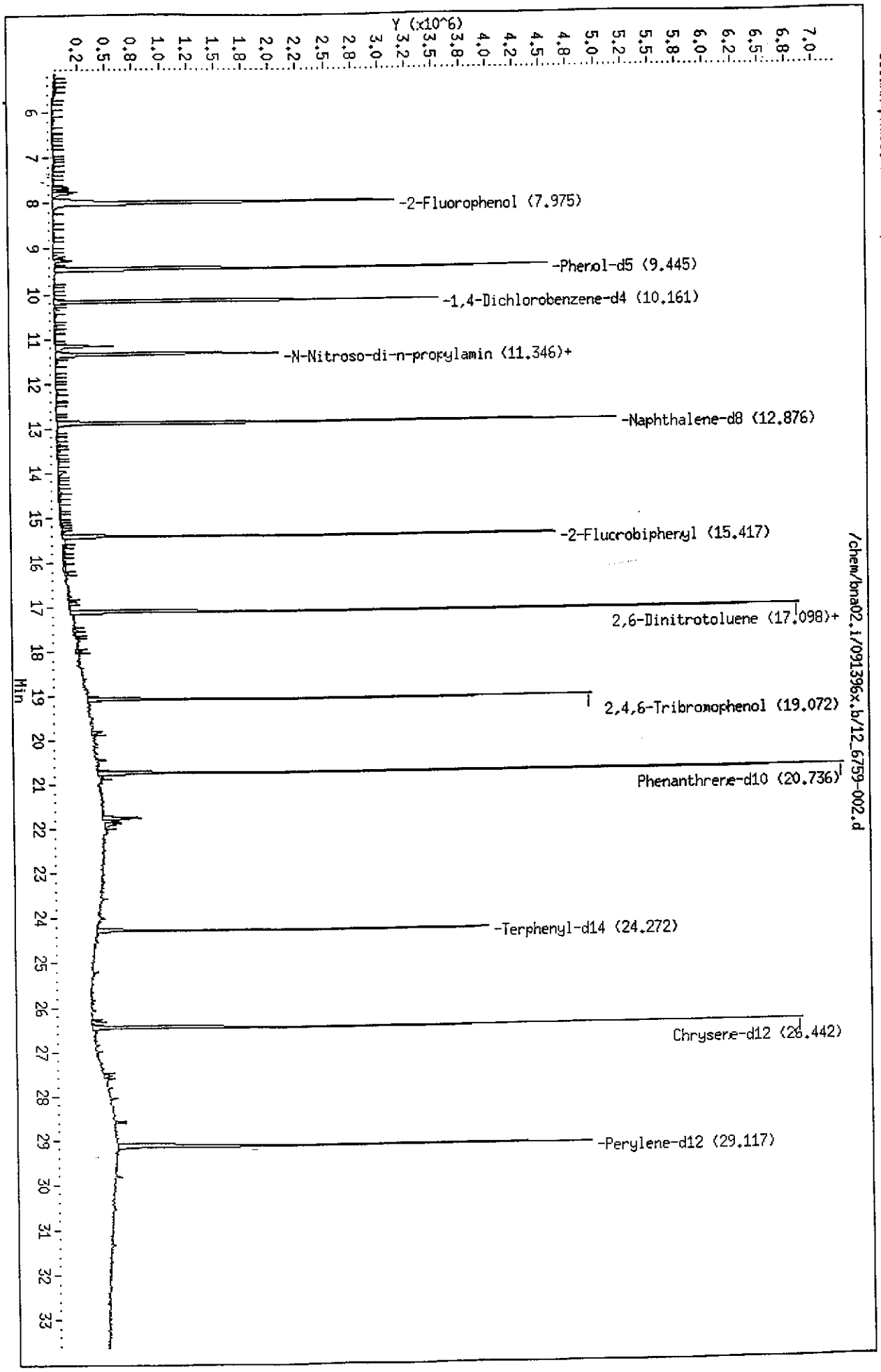
Client SDG: 8270
Client Smp ID: CURTIS&TOMPKINS,LTD
Sample Date:
Sample Point:
Date Received:
Level: LOW

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	11.160	6.29	NJ

126759-2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Date : 13-SEP-1996 20:49
Client ID: CURTIS&TOMPKINS,LTD
Sample Info:
Volume Injected (uL): 1.0
Column phase: Xti 5 x .5 u
Instrument: bna02.i
Operator: dsh
Column diameter: 0.25
Y (x10^6)
Min
-2-Fluorophenol (7.975)
-Phenol-d5 (9.445)
-1,4-Dichlorobenzene-d4 (10.161)
-N-Nitroso-di-n-propylamin (11.346)+
-Naphthalene-d8 (12.876)
-2-Flucrobiphenyl (15.417)
2,6-Dinitrotoluene (17.098)+
2,4,6-Tribromophenol (19.072)
Phenanthrene-d10 (20.736)
-Terphenyl-d14 (24.272)
Chrysene-d12 (26.442)
-Perylene-d12 (29.117)
/chem/bna02.i/091396x.b/12_6759-002.d

Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

Field ID: SCI-MW-7
Lab ID: 126759-003
Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Sampled: 09/06/96
Received: 09/06/96
Extracted: 09/09/96
Analyzed: 09/18/96

Analyte	Result	Reporting Limit
Phenol	ND	9.4
2-Chlorophenol	ND	9.4
Benzyl alcohol	ND	9.4
2-Methylphenol	ND	9.4
4-Methylphenol	4.7 J	9.4
2-Nitrophenol	ND	47
2,4-Dimethylphenol	ND	9.4
Benzoic acid	ND	47
2,4-Dichlorophenol	ND	9.4
4-Chloro-3-methylphenol	ND	9.4
2,4,6-Trichlorophenol	ND	9.4
2,4,5-Trichlorophenol	ND	47
2,4-Dinitrophenol	ND	47
4-Nitrophenol	ND	47
4,6-Dinitro-2-methylphenol	ND	47
Pentachlorophenol	ND	47
N-Nitrosodimethylamine	ND	9.4
Aniline	ND	9.4
bis(2-Chloroethyl)ether	ND	9.4
1,3-Dichlorobenzene	ND	9.4
1,4-Dichlorobenzene	ND	9.4
1,2-Dichlorobenzene	ND	9.4
bis(2-Chloroisopropyl) ether	ND	9.4
N-Nitroso-di-n-propylamine	ND	9.4
Hexachloroethane	ND	9.4
Nitrobenzene	ND	9.4
Isophorone	ND	9.4
bis(2-Chloroethoxy)methane	ND	9.4
1,2,4-Trichlorobenzene	ND	9.4
Naphthalene	ND	9.4
4-Chloroaniline	ND	9.4
Hexachlorobutadiene	ND	9.4
2-Methylnaphthalene	ND	9.4
Hexachlorocyclopentadiene	ND	9.4
2-Chloronaphthalene	ND	47
2-Nitroaniline	ND	9.4
Dimethylphthalate	ND	9.4
Acenaphthylene	ND	

Semivolatile Organics by GC/MS

Field ID: SCI-MW-7
Lab ID: 126759-003
Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Sampled: 09/06/96
Received: 09/06/96
Extracted: 09/09/96
Analyzed: 09/18/96

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	9.4
3-Nitroaniline	ND	47
Acenaphthene	ND	9.4
Dibenzofuran	ND	9.4
2,4-Dinitrotoluene	ND	9.4
Diethylphthalate	ND	9.4
4-Chlorophenyl-phenylether	ND	9.4
Fluorene	ND	9.4
4-Nitroaniline	ND	47
N-Nitrosodiphenylamine	ND	9.4
Azobenzene	ND	9.4
4-Bromophenyl-phenylether	ND	9.4
Hexachlorobenzene	ND	9.4
Phenanthrene	ND	9.4
Anthracene	ND	9.4
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4
Pyrene	ND	9.4
Butylbenzylphthalate	ND	9.4
3,3'-Dichlorobenzidine	ND	47
Benzo(a)anthracene	ND	9.4
Chrysene	ND	9.4
bis(2-Ethylhexyl)phthalate	ND	9.4
Di-n-octylphthalate	ND	9.4
Benzo(b)fluoranthene	ND	9.4
Benzo(k)fluoranthene	ND	9.4
Benzo(a)pyrene	ND	9.4
Indeno(1,2,3-cd)pyrene	ND	9.4
Dibenz(a,h)anthracene	ND	9.4
Benzo(g,h,i)perylene	ND	9.4

Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	22	21-110
Phenol-d5	84	10-110
2,4,6-Tribromophenol	92	10-123
Nitrobenzene-d5	93	35-114
2-Fluorobiphenyl	85	43-116
Terphenyl-d14	43	33-141

J: Estimated Value

Data File: /chem/bna02.i/091896x.b/08_6759-3re.d
Report Date: 19-Sep-1996 10:06

Curtis & Tompkins Labs

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: CURTIS & TOMPKINS
Lab Smp Id: s,126759-003
Operator : dsh
Sample Location:
Sample Matrix: WATER
Analysis Type: SV

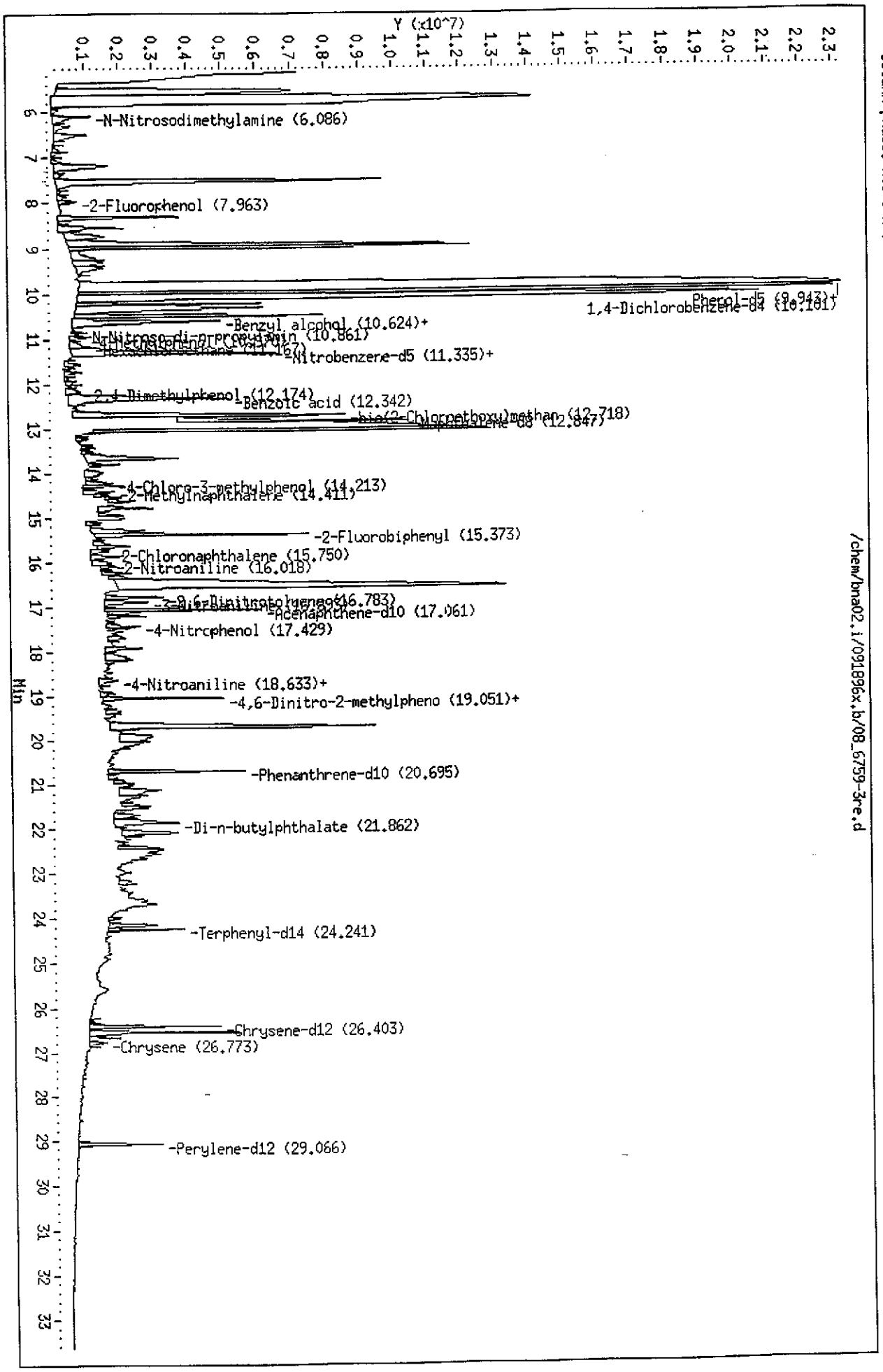
Client SDG: 8270
Client Smp ID: CURTIS&TOMPKINS,LTD
Sample Date:
Sample Point:
Date Received:
Level: LOW

Number TICs found: 17

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	79-01-6	Trichloroethylene	5.535	15.86	NJ
2.	123-91-1	1,4-Dioxane	5.722	54.59	NJ
3.		Unknown	7.500	13.65	NJ
4.		Unknown	8.948	17.68	NJ
5.	107-41-5	Hexylene Glycol	8.997	12.38	NJ
6.	20324-32-7	2-Propanol, 1-(2-methoxy-1-	10.002	26.05	NJ
7.		Unknown	10.229	4.59	NJ
8.		Unknown	10.328	11.81	NJ
9.		Unknown	10.506	7.13	NJ
10.		Unknown	13.054	65.01	NJ
11.	118-90-1	Benzoic acid, 2-methyl-	13.678	21.02	NJ
12.		Unknown	16.565	355.26	NJ
13.		Unknown	19.698	138.91	NJ
14.		Unknown	19.907	32.80	NJ
15.		Unknown	21.113	31.71	NJ
16.		Unknown	22.081	28.91	NJ
17.		Unknown	26.553	62.18	NJ

126759-3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Date : 18-SEP-1996 18:25
Client ID: CURTIS&TOMPKINS,LTD
Sample Info:
Volume Injected (uL): 1.0
Column phase: Xti 5 x .5 u
Instrument: bna02.i
Operator: dsh
Column diameter: 0.25
/chem/bna02.i/091896x.b/08_6759-3re.d
Y (x10^7)
Min
-N-Nitrosodimethylamine (6.086)
-2-Fluorophenol (7.963)
Phenol-d5 (9.943)+
1,4-Dichlorobenzene-d4 (10.101)
-Benzyl alcohol (10.624)+
Nitrobenzene-d5 (11.335)+
Benzoic acid (12.342)
Acenaphthene-d10 (12.847)
4-Chloro-3-methylphenol (14.213)
2-Methylnaphthalene (14.411)
-2-Fluorobiphenyl (15.373)
2-Chloronaphthalene (15.750)
2-Nitroaniline (16.018)
Acenaphthene-d10 (17.061)
-4-Nitrophenol (17.429)
-4-Nitroaniline (18.633)+
-4,6-Dinitro-2-methylpheno (19.051)+
-Phenanthrene-d10 (20.695)
-Di-n-butylphthalate (21.862)
-Terphenyl-d14 (24.241)
Chrysene-d12 (26.403)
-Chrysene (26.773)
-Perylene-d12 (29.066)

Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

Field ID: SCI-MW-18
Lab ID: 126759-004
Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Sampled: 09/06/96
Received: 09/06/96
Extracted: 09/09/96
Analyzed: 09/18/96

Analyte	Result	Reporting Limit
Phenol	ND	9.4
2-Chlorophenol	ND	9.4
Benzyl alcohol	ND	9.4
2-Methylphenol	ND	9.4
4-Methylphenol	ND	9.4
2-Nitrophenol	ND	47
2,4-Dimethylphenol	ND	9.4
Benzoic acid	ND	47
2,4-Dichlorophenol	ND	9.4
4-Chloro-3-methylphenol	ND	9.4
2,4,6-Trichlorophenol	ND	9.4
2,4,5-Trichlorophenol	ND	47
2,4-Dinitrophenol	ND	47
4-Nitrophenol	ND	47
4,6-Dinitro-2-methylphenol	ND	47
Pentachlorophenol	ND	47
N-Nitrosodimethylamine	ND	9.4
Aniline	ND	9.4
bis(2-Chloroethyl)ether	ND	9.4
1,3-Dichlorobenzene	ND	9.4
1,4-Dichlorobenzene	ND	9.4
1,2-Dichlorobenzene	ND	9.4
bis(2-Chloroisopropyl) ether	ND	9.4
N-Nitroso-di-n-propylamine	ND	9.4
Hexachloroethane	ND	9.4
Nitrobenzene	ND	9.4
Isophorone	ND	9.4
bis(2-Chloroethoxy)methane	ND	9.4
1,2,4-Trichlorobenzene	ND	9.4
Naphthalene	ND	9.4
4-Chloroaniline	ND	9.4
Hexachlorobutadiene	ND	9.4
2-Methylnaphthalene	ND	9.4
Hexachlorocyclopentadiene	ND	9.4
2-Chloronaphthalene	ND	9.4
2-Nitroaniline	ND	47
Dimethylphthalate	ND	9.4
Acenaphthylene	ND	9.4

Semivolatile Organics by GC/MS

Field ID: SCI-MW-18
Lab ID: 126759-004
Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Sampled: 09/06/96
Received: 09/06/96
Extracted: 09/09/96
Analyzed: 09/18/96

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	9.4
3-Nitroaniline	ND	47
Acenaphthene	ND	9.4
Dibenzofuran	ND	9.4
2,4-Dinitrotoluene	ND	9.4
Diethylphthalate	ND	9.4
4-Chlorophenyl-phenylether	ND	9.4
Fluorene	ND	9.4
4-Nitroaniline	ND	47
N-Nitrosodiphenylamine	ND	9.4
Azobenzene	ND	9.4
4-Bromophenyl-phenylether	ND	9.4
Hexachlorobenzene	ND	9.4
Phenanthrene	ND	9.4
Anthracene	ND	9.4
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4
Pyrene	ND	9.4
Butylbenzylphthalate	ND	9.4
3,3'-Dichlorobenzidine	ND	47
Benzo(a)anthracene	ND	9.4
Chrysene	ND	9.4
bis(2-Ethylhexyl)phthalate	ND	9.4
Di-n-octylphthalate	ND	9.4
Benzo(b)fluoranthene	ND	9.4
Benzo(k)fluoranthene	ND	9.4
Benzo(a)pyrene	ND	9.4
Indeno(1,2,3-cd)pyrene	ND	9.4
Dibenz(a,h)anthracene	ND	9.4
Benzo(g,h,i)perylene	ND	9.4

Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	71	21-110
Phenol-d5	79	10-110
2,4,6-Tribromophenol	85	10-123
Nitrobenzene-d5	87	35-114
2-Fluorobiphenyl	77	43-116
Terphenyl-d14	37	33-141

Data File: /chem/bna02.i/091896x.b/09_6759-4re.d
Report Date: 19-Sep-1996 10:06

Curtis & Tompkins Labs

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: CURTIS & TOMPKINS
Lab Smp Id: s,126759-004
Operator : dsh
Sample Location:
Sample Matrix: WATER
Analysis Type: SV

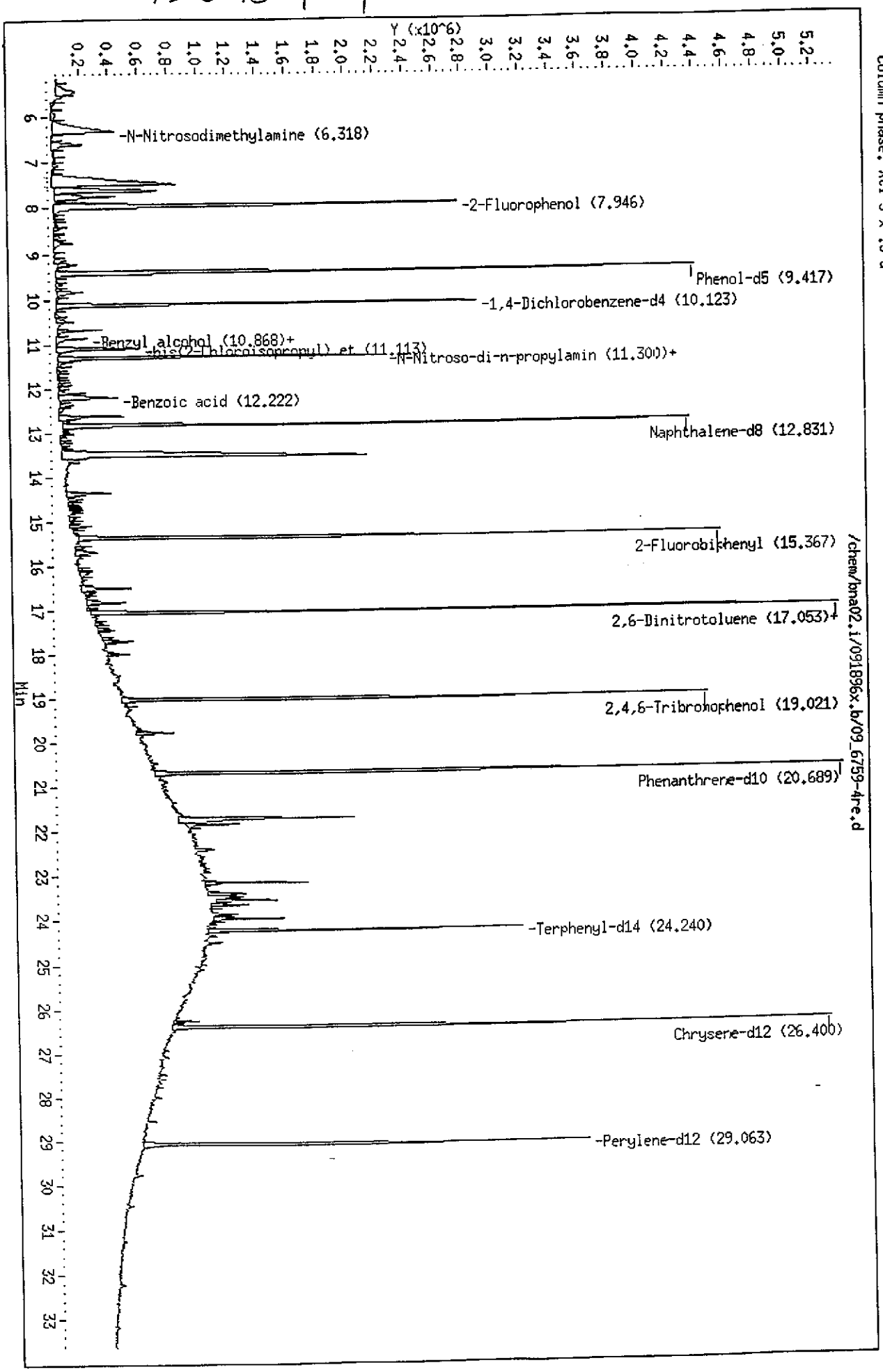
Client SDG: 8270
Client Smp ID: CURTIS&TOMPKINS,LTD
Sample Date:
Sample Point:
Date Received:
Level: LOW

Number TICs found: 13

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	5.417	5.59	NJ
2.	107-92-6	Butanoic acid	6.602	5.03	NJ
3.	503-74-2	Butanoic acid, 3-methyl-	7.495	38.70	NJ
4.		Unknown	7.632	17.01	NJ
5.		Unknown	7.750	9.78	NJ
6.	2548-87-0	2-Octenal, (E)-	10.682	4.03	NJ
7.		Unknown	12.634	5.24	NJ
8.	103-82-2	Benzeneacetic acid	13.539	42.08	NJ
9.	91-64-5	2H-1-Benzopyran-2-one	16.500	3.96	NJ
10.		Unknown	21.714	13.39	NJ
11.		Unknown	23.161	4.32	NJ
12.		Unknown	23.550	3.84	NJ
13.		Unknown	23.970	4.40	NJ

126759-4


Data File: /chem/bna02.i/091896x.b/09_6759-4re.d
Date : 18-SEP-1996 19:09
Client ID: CURTIS&TOMPKINS,LTD
Sample Info:
Volume Injected (uL): 1.0
Column phase: Xti 5 x .5 u
Instrument: bna02.i
Operator: dsh
Column diameter: 0.25
Y (x10^6)
Min
-N-Nitrosodimethylamine (6.318)
-2-Fluorophenol (7.946)
Phenol-d5 (9.417)
-1,4-Dichlorobenzene-d4 (10.123)
-Benzyl alcohol (10.868)+
-bis(2-Chloroisopropyl) et (11.113)
-N-Nitroso-di-n-propylamin (11.300)+
-Benzoic acid (12.222)
Naphthalene-d8 (12.831)
2-Fluorobiphenyl (15.367)
2,6-Dinitrotoluene (17.053)+
2,4,6-Tribromophenol (19.021)
Phenanthrene-d10 (20.689)
-Terphenyl-d14 (24.240)
Chrysene-d12 (26.400)
-Perylene-d12 (29.063)
/chem/bna02.i/091896x.b/09_6759-4re.d

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Prep Date: 09/09/96
Analysis Date: 09/11/96

MB Lab ID: QC29980

Analyte	Result	Reporting Limit
Phenol	ND	10
2-Chlorophenol	ND	10
Benzyl alcohol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	50
2,4-Dimethylphenol	ND	10
Benzoic acid	ND	50
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	50
2,4-Dinitrophenol	ND	50
4-Nitrophenol	ND	50
4,6-Dinitro-2-methylphenol	ND	50
Pentachlorophenol	ND	10
N-Nitrosodimethylamine	ND	10
Aniline	ND	10
bis(2-Chloroethyl)ether	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
1,2-Dichlorobenzene	ND	10
bis(2-Chloroisopropyl) ether	ND	10
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	50
2-Nitroaniline	ND	10
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	50
3-Nitroaniline	ND	

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Prep Date: 09/09/96
Analysis Date: 09/11/96

MB Lab ID: QC29980

Analyte	Result	Reporting Limit
Acenaphthene	ND	10
Dibenzofuran	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	50
N-Nitrosodiphenylamine	ND	10
Azobenzene	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	50
Benzo(a)anthracene	ND	10
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10

Surrogate	%Rec	Recovery Limits
2-Fluorophenol	59	21-110
Phenol-d5	64	10-110
2,4,6-Tribromophenol	49	10-123
Nitrobenzene-d5	61	35-114
2-Fluorobiphenyl	62	43-116
Terphenyl-d14	64	33-141

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Prep Date: 09/09/96
Analysis Date: 09/11/96

BS Lab ID: QC29981

Analyte	Spike Added	BS	%Rec	#	Limits
Phenol	100	64.31	64		12-110
2-Chlorophenol	100	71.21	71		27-123
4-Chloro-3-methylphenol	100	63.38	63		23-97
4-Nitrophenol	100	50.17	50		10-80
Pentachlorophenol	100	52.23	52		9-103
1,4-Dichlorobenzene	50	29.99	60		36-97
N-Nitroso-di-n-propylamine	50	26.68	53		41-116
1,2,4-Trichlorobenzene	50	29.47	59		39-98
Acenaphthene	50	35.01	70		46-118
2,4-Dinitrotoluene	50	33.25	67		24-96
Pyrene	50	34.66	69		26-127

Surrogate	%Rec	Limits
2-Fluorophenol	66	21-110
Phenol-d5	69	10-110
2,4,6-Tribromophenol	55	10-123
Nitrobenzene-d5	67	35-114
2-Fluorobiphenyl	66	43-116
Terphenyl-d14	69	33-141

BSD Lab ID: QC29982

Analyte	Spike Added	BSD	%Rec	#	Limits	RPD	#	Limit
Phenol	100	61.22	61		12-110	5		42
2-Chlorophenol	100	68.04	68		27-123	5		40
4-Chloro-3-methylphenol	100	62.62	62		23-97	1		42
4-Nitrophenol	100	50.61	51		10-80	1		50
Pentachlorophenol	100	58.26	58		9-103	11		50
1,4-Dichlorobenzene	50	28.88	58		36-97	4		28
N-Nitroso-di-n-propylamine	50	25.86	52		41-116	3		38
1,2,4-Trichlorobenzene	50	28.62	57		39-98	3		28
Acenaphthene	50	34.94	70		46-118	0		31
2,4-Dinitrotoluene	50	33.64	67		24-96	3		38
Pyrene	50	34.51	69		26-127	0		31

Surrogate	%Rec	Limits
2-Fluorophenol	61	21-110
Phenol-d5	65	10-110
2,4,6-Tribromophenol	55	10-123
Nitrobenzene-d5	65	35-114
2-Fluorobiphenyl	65	43-116
Terphenyl-d14	70	33-141

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 11 outside limits
Spike Recovery: 0 out of 22 outside limits
DO: Surrogate diluted out

PCBs

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: PCB
Prep Method: EPA 3520

Field ID: SCI-MW-1
Lab ID: 126759-002
Matrix: Water
Batch#: 29758
Units: ug/L
Diln Fac: 1

Sampled: 09/06/96
Received: 09/06/96
Extracted: 09/11/96
Analyzed: 09/13/96

Analyte	Result	Reporting Limit
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0

Surrogate	%Recovery	Recovery Limits
TCMX	83	60-150
Decachlorobiphenyl	26*	30-130

* Values outside of QC limits

PCBs

Client:	Subsurface Consultants	Analysis Method:	PCB
Project#:	133.005	Prep Method:	EPA 3520
Location:	KOT		

Field ID:	SCI-MW-7	Sampled:	09/06/96
Lab ID:	126759-003	Received:	09/06/96
Matrix:	Water	Extracted:	09/11/96
Batch#:	29758	Analyzed:	09/13/96
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0

Surrogate	%Recovery	Recovery Limits
TCMX	53*	60-150
Decachlorobiphenyl	23*	30-130

* Values outside of QC limits

PCBs

Client:	Subsurface Consultants	Analysis Method:	PCB
Project#:	133.005	Prep Method:	EPA 3520
Location:	KOT		

Field ID:	SCI-MW-18	Sampled:	09/06/96
Lab ID:	126759-004	Received:	09/06/96
Matrix:	Water	Extracted:	09/11/96
Batch#:	29758	Analyzed:	09/14/96
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0

Surrogate	%Recovery	Recovery Limits
TCMX	66	60-150
Decachlorobiphenyl	31	30-130

Curtis & Tompkins, Ltd.

Lab #: 126759 BATCH QC REPORT

Polychlorinated Biphenyls

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: PCB
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 29758
Units: ug/L
Diln Fac: 1

Prep Date: 09/11/96
Analysis Date: 09/13/96

MB Lab ID: QC30243

Analyte	Result	Reporting Limit
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0

Surrogate	%Rec	Recovery Limits
TCMX	76	60-150
Decachlorobiphenyl	84	30-130

Curtis & Tompkins, Ltd.

Lab #: 126759 BATCH QC REPORT

Polychlorinated Biphenyls

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: PCB
Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 29758
Units: ug/L
Diln Fac: 1

Prep Date: 09/11/96
Analysis Date: 09/13/96

BS Lab ID: QC30244

Analyte	Spike Added	BS	%Rec #	Limits
Aroclor-1260	5	4.09	82	50-128
Surrogate	**%Rec**	**Limits**		
TCMX	63	60-150		
Decachlorobiphenyl	83	30-130		

BSD Lab ID: QC30245

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Aroclor-1260	5	4.11	82	50-128	0	20
Surrogate	**%Rec**	**Limits**				
TCMX	68	60-150				
Decachlorobiphenyl	51	30-130				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

Curtis & Tompkins, Ltd.

SAMPLE ID: SCI-MW-1
LAB ID: 126759-002
CLIENT: Subsurface Consultants
PROJECT ID: 133.005
LOCATION: KOT
MATRIX: Filtrate

DATE SAMPLED: 09/06/96
DATE RECEIVED: 09/06/96
DATE REPORTED: 09/23/96

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	29688	EPA 6010A	09/11/96
Arsenic	ND	5.0	1	29688	EPA 6010A	09/11/96
Barium	150	10	1	29688	EPA 6010A	09/11/96
Beryllium	ND	2.0	1	29688	EPA 6010A	09/11/96
Cadmium	ND	2.0	1	29688	EPA 6010A	09/11/96
Chromium (total)	ND	10	1	29688	EPA 6010A	09/11/96
Cobalt	ND	20	1	29688	EPA 6010A	09/11/96
Copper	ND	10	1	29688	EPA 6010A	09/11/96
Lead	ND	3.0	1	29688	EPA 6010A	09/11/96
Mercury	ND	0.20	1	29896	EPA 7470	09/18/96
Molybdenum	ND	20	1	29688	EPA 6010A	09/11/96
Nickel	ND	20	1	29688	EPA 6010A	09/11/96
Selenium	17	5.0	1	29688	EPA 6010A	09/11/96
Silver	ND	5.0	1	29688	EPA 6010A	09/11/96
Thallium	ND	5.0	1	29688	EPA 6010A	09/11/96
Vanadium	ND	10	1	29688	EPA 6010A	09/11/96
Zinc	ND	20	1	29688	EPA 6010A	09/11/96

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

SAMPLE ID: SCI-MW-7
LAB ID: 126759-003
CLIENT: Subsurface Consultants
PROJECT ID: 133.005
LOCATION: KOT
MATRIX: Filtrate

DATE SAMPLED: 09/06/96
DATE RECEIVED: 09/06/96
DATE REPORTED: 09/23/96

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	29688	EPA 6010A	09/11/96
Arsenic	24	5.0	1	29688	EPA 6010A	09/11/96
Barium	290	10	1	29688	EPA 6010A	09/11/96
Beryllium	ND	2.0	1	29688	EPA 6010A	09/11/96
Cadmium	ND	2.0	1	29688	EPA 6010A	09/11/96
Chromium (total)	ND	10	1	29688	EPA 6010A	09/11/96
Cobalt	ND	20	1	29688	EPA 6010A	09/11/96
Copper	13	10	1	29688	EPA 6010A	09/11/96
Lead	ND	3.0	1	29688	EPA 6010A	09/11/96
Mercury	0.52	0.20	1	29896	EPA 7470	09/18/96
Molybdenum	ND	20	1	29688	EPA 6010A	09/11/96
Nickel	29	20	1	29688	EPA 6010A	09/11/96
Selenium	18	5.0	1	29688	EPA 6010A	09/11/96
Silver	ND	5.0	1	29688	EPA 6010A	09/11/96
Thallium	ND	5.0	1	29688	EPA 6010A	09/11/96
Vanadium	12	10	1	29688	EPA 6010A	09/11/96
Zinc	ND	20	1	29688	EPA 6010A	09/11/96

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

SAMPLE ID: SCI-MW-18
LAB ID: 126759-004
CLIENT: Subsurface Consultants
PROJECT ID: 133.005
LOCATION: KOT
MATRIX: Filtrate

DATE SAMPLED: 09/06/96
DATE RECEIVED: 09/06/96
DATE REPORTED: 09/23/96

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	29688	EPA 6010A	09/11/96
Arsenic	20	5.0	1	29688	EPA 6010A	09/11/96
Barium	160	10	1	29688	EPA 6010A	09/11/96
Beryllium	ND	2.0	1	29688	EPA 6010A	09/11/96
Cadmium	ND	2.0	1	29688	EPA 6010A	09/11/96
Chromium (total)	ND	10	1	29688	EPA 6010A	09/11/96
Cobalt	ND	20	1	29688	EPA 6010A	09/11/96
Copper	ND	10	1	29688	EPA 6010A	09/11/96
Lead	ND	3.0	1	29688	EPA 6010A	09/11/96
Mercury	ND	0.20	1	29896	EPA 7470	09/18/96
Molybdenum	ND	20	1	29688	EPA 6010A	09/11/96
Nickel	26	20	1	29688	EPA 6010A	09/11/96
Selenium	22	5.0	1	29688	EPA 6010A	09/11/96
Silver	ND	5.0	1	29688	EPA 6010A	09/11/96
Thallium	ND	5.0	1	29688	EPA 6010A	09/11/96
Vanadium	19	10	1	29688	EPA 6010A	09/11/96
Zinc	ND	20	1	29688	EPA 6010A	09/11/96

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: Subsurface Consultants
JOB NUMBER: 126759

DATE REPORTED: 09/23/96

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	ug/L	1	29688	EPA 6010A	09/11/96
Arsenic	ND	5	ug/L	1	29688	EPA 6010A	09/11/96
Barium	ND	10	ug/L	1	29688	EPA 6010A	09/11/96
Beryllium	ND	2	ug/L	1	29688	EPA 6010A	09/11/96
Cadmium	ND	2	ug/L	1	29688	EPA 6010A	09/11/96
Chromium (total)	ND	10	ug/L	1	29688	EPA 6010A	09/11/96
Cobalt	ND	20	ug/L	1	29688	EPA 6010A	09/11/96
Copper	ND	10	ug/L	1	29688	EPA 6010A	09/11/96
Lead	ND	3	ug/L	1	29688	EPA 6010A	09/11/96
Mercury	ND	0.2	ug/L	1	29896	EPA 7470	09/18/96
Molybdenum	ND	20	ug/L	1	29688	EPA 6010A	09/11/96
Nickel	ND	20	ug/L	1	29688	EPA 6010A	09/11/96
Selenium	ND	5	ug/L	1	29688	EPA 6010A	09/11/96
Silver	ND	5	ug/L	1	29688	EPA 6010A	09/11/96
Thallium	ND	5	ug/L	1	29688	EPA 6010A	09/11/96
Vanadium	ND	10	ug/L	1	29688	EPA 6010A	09/11/96
Zinc	ND	20	ug/L	1	29688	EPA 6010A	09/11/96

ND = Not Detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: Subsurface Consultants
JOB NUMBER: 126759

DATE REPORTED: 09/23/96

BATCH QC REPORT
BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS% Rec.	BSD% Rec.	Rec. Limits	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Antimony	500	507	555	ug/L	101	111	80-120	9	35	29688	EPA 6010A	09/11/96
Arsenic	2000	1940	1970	ug/L	97	99	80-120	2	35	29688	EPA 6010A	09/11/96
Barium	2000	1980	1970	ug/L	99	99	80-120	1	35	29688	EPA 6010A	09/11/96
Beryllium	50	50.4	51.5	ug/L	101	103	80-120	2	35	29688	EPA 6010A	09/11/96
Cadmium	50	52.8	53.1	ug/L	106	106	80-120	1	35	29688	EPA 6010A	09/11/96
Chromium (total)	200	198	199	ug/L	99	100	80-120	1	35	29688	EPA 6010A	09/11/96
Cobalt	500	492	507	ug/L	98	101	80-120	3	35	29688	EPA 6010A	09/11/96
Copper	250	249	248	ug/L	100	99	80-120	0	35	29688	EPA 6010A	09/11/96
Lead	500	505	520	ug/L	101	104	80-120	3	35	29688	EPA 6010A	09/11/96
Mercury	5	4.596	4.36	ug/L	92	87	80-120	5	35	29896	EPA 7470	09/18/96
Molybdenum	400	406	414	ug/L	102	104	80-120	2	35	29688	EPA 6010A	09/11/96
Nickel	500	507	516	ug/L	101	103	80-120	2	35	29688	EPA 6010A	09/11/96
Selenium	2000	2020	2040	ug/L	101	102	80-120	1	35	29688	EPA 6010A	09/11/96
Silver	100	90.4	89.7	ug/L	90	90	80-120	1	35	29688	EPA 6010A	09/11/96
Thallium	2000	2040	2070	ug/L	102	104	80-120	2	35	29688	EPA 6010A	09/11/96
Vanadium	500	495	498	ug/L	99	100	80-120	1	35	29688	EPA 6010A	09/11/96
Zinc	500	480	493	ug/L	96	99	80-120	3	35	29688	EPA 6010A	09/11/96

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Lafayette, CA 94549

Date: 23-SEP-96
Lab Job Number: 126747
Project ID: 133.005
Location: KOT

Reviewed by: _____

Reviewed by: _____

Curtis & Tompkins, Ltd.

Client: Subsurface Consultants

Laboratory Login Number: 126747

Project Name: KOT
Project Number: 133.005

Report Date: 23 September 96

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD: SMWW 17:5520BF**

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
126747-002	MW-6	Water	05-SEP-96	05-SEP-96	16-SEP-96	89.	mg/L	5	TR	29850
126747-003	MW-7	Water	05-SEP-96	05-SEP-96	16-SEP-96	ND	mg/L	5	TR	29850
126747-004	SCI-MW-3	Water	05-SEP-96	05-SEP-96	16-SEP-96	ND	mg/L	5	TR	29850

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

Q C B a t c h R e p o r t

Client: Subsurface Consultants
Project Name: KOT
Project Number: 133.005

Laboratory Login Number: 126747
Report Date: 23 September 96

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 29850

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	5	mg/L	SMWW 17:5520BF	16-SEP-96

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	87%	SMWW 17:5520BF	16-SEP-96
BSD	84%	SMWW 17:5520BF	16-SEP-96

		Control Limits
Average Spike Recovery	85%	80% - 120%
Relative Percent Difference	4.4%	< 20%

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126747-001	MW-2	29639	09/05/96	09/08/96	09/08/96	

Matrix: Water

Analyte	Units	126747-001
Diln Fac:		1
Gasoline	ug/L	58 Z
Surrogate		
Trifluorotoluene	%REC	97
Bromobenzene	%REC	91

Z: Sample exhibits unknown single peak or peaks

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126747-002	MW-6	29639	09/05/96	09/07/96	09/07/96	
126747-003	MW-7	29639	09/05/96	09/07/96	09/07/96	
126747-004	SCI-MW-3	29639	09/05/96	09/07/96	09/07/96	

Matrix: Water

Analyte Diln Fac:	Units	126747-002 1	126747-003 1	126747-004 1
Gasoline	ug/L	200 H	<50	<50
Surrogate				
Trifluorotoluene	%REC	95	96	96
Bromobenzene	%REC	91	85	83

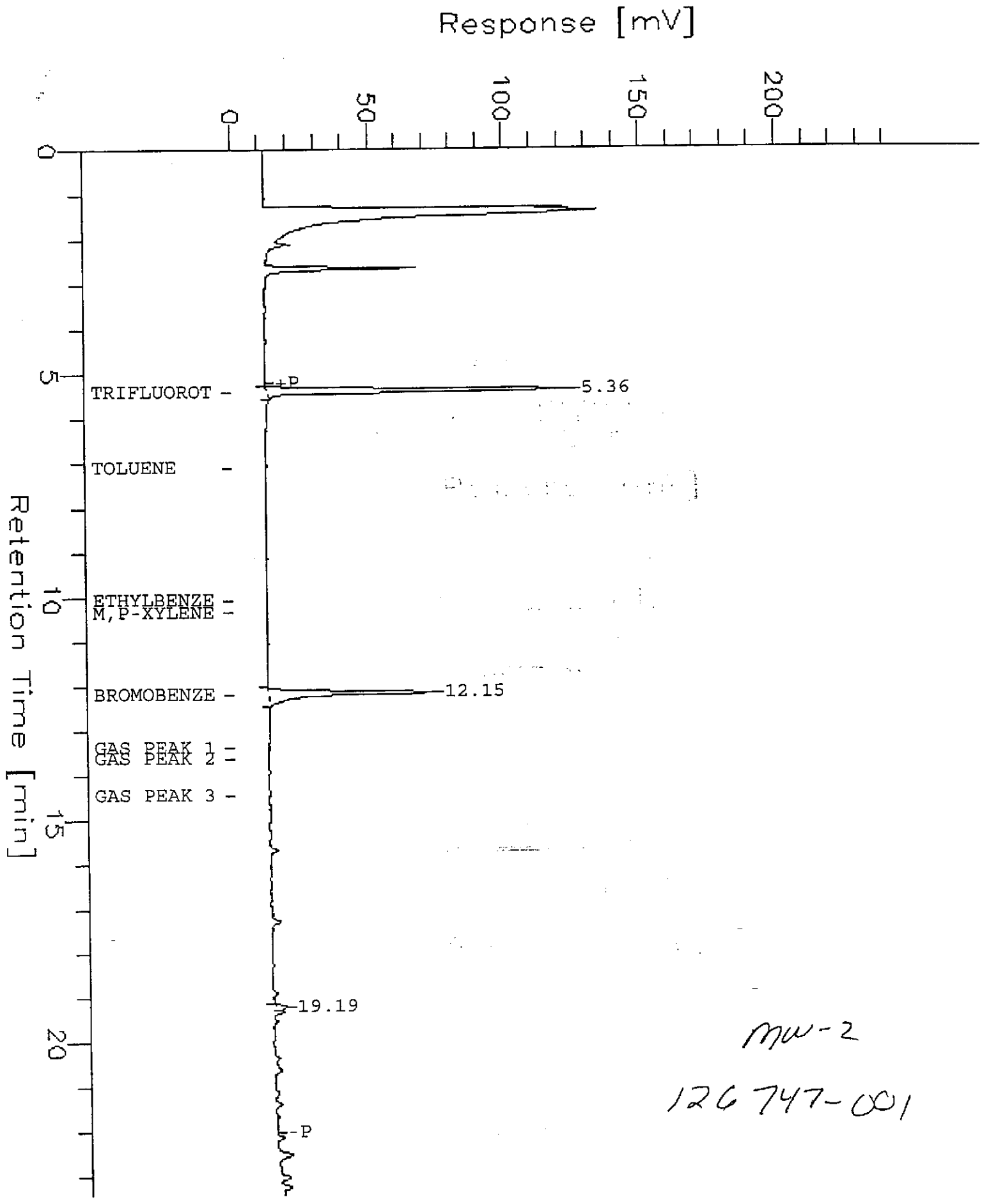
H: Heavier hydrocarbons than indicated standard

TVH2 - GC-05 RTX-1

FileName : G:\GC05\250H046.raw
Start Time : 0.00 min End Time : 23.42 min
Scale Factor: -1 Plot Offset: 0 mV

Date : 9/8/96 9:30 PM
Low Point : -0.28 mV
Plot Scale: 250 mV

High Point : 249.72 mV



MW-2

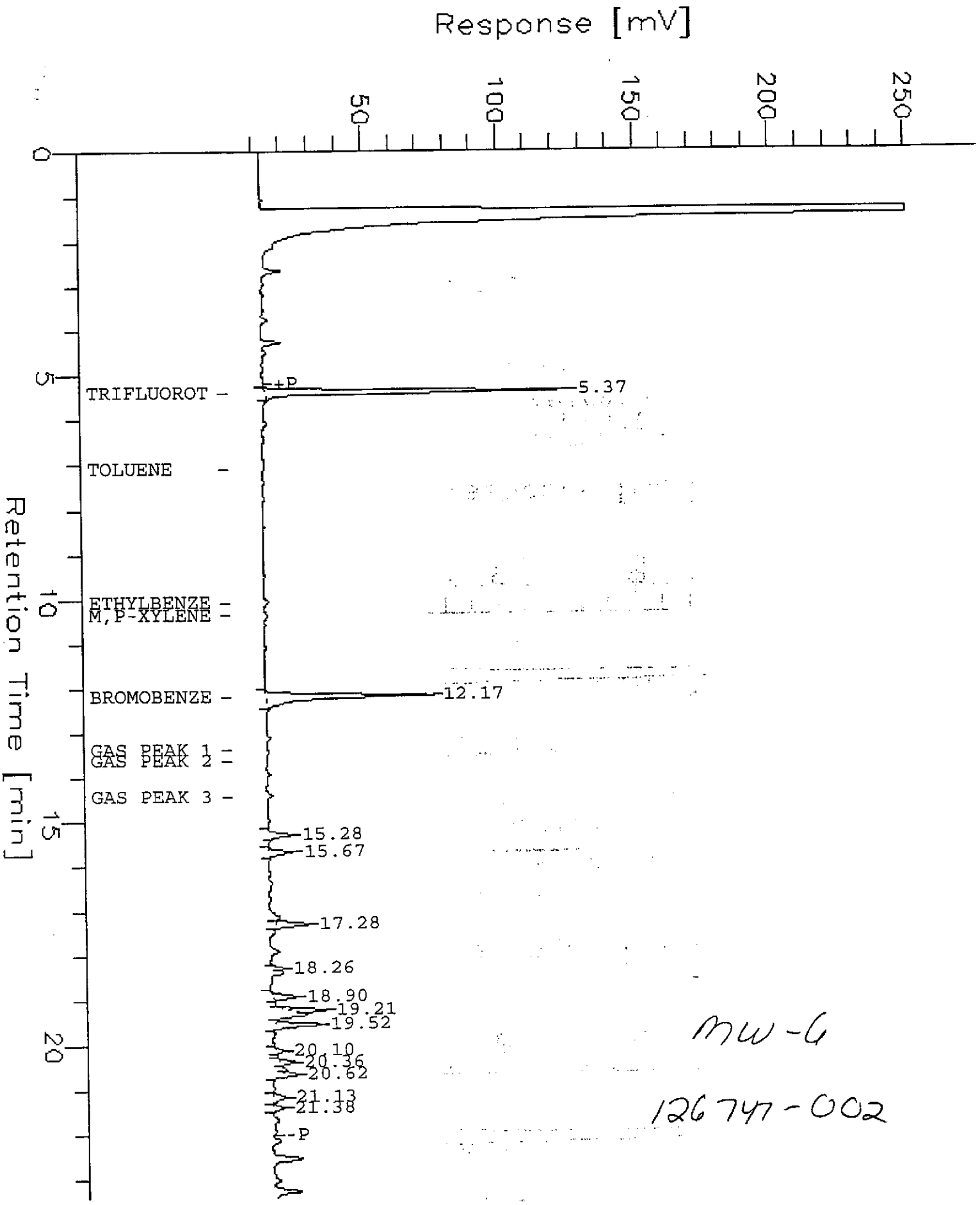
126747-001

TVH2 - GC-05 RTX-1

FileName : G:\GC05\250H034.raw
Start Time : 0.00 min End Time : 23.42 min
Scale Factor: -1 Plot Offset: 1 mV

Date : 9/7/96 10:20 AM
Low Point : 0.65 mV
Plot Scale: 250 mV

High Point : 250.65 mV



MW-6

126747-002

Curtis & Tompkins, Ltd.

Lab #: 126747 BATCH QC REPORT

TVH-Total Volatile Hydrocarbons	
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

METHOD BLANK	
Matrix: Water	Prep Date: 09/06/96
Batch#: 29639	Analysis Date: 09/06/96
Units: ug/L	
Diln Fac: 1	

MB Lab ID: QC29799

Analyte	Result	
Gasoline	<50	
Surrogate	**%Rec**	**Recovery Limits**
Trifluorotoluene	100	69-120
Bromobenzene	79	70-122

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 29639
Units: ug/L
Diln Fac: 1

Prep Date: 09/06/96
Analysis Date: 09/06/96

LCS Lab ID: QC29800

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	2007	2000	100	80-120
Surrogate	**%Rec**	**Limits**		
Trifluorotoluene	96	69-120		
Bromobenzene	103	70-122		

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

Curtis & Tompkins, Ltd.

Lab #: 126747 BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 126718-001
Matrix: Water
Batch#: 29639
Units: ug/L
Diln Fac: 1

Sample Date: 08/28/96
Received Date: 08/31/96
Prep Date: 09/06/96
Analysis Date: 09/06/96

MS Lab ID: QC29802

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	2000	62.6	1921	96	75-125
Surrogate	**%Rec**	**Limits**			
Trifluorotoluene	96	69-120			
Bromobenzene	104	70-122			

MSD Lab ID: QC29803

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	2000	1973	99	75-125	3	20
Surrogate	**%Rec**	**Limits**				
Trifluorotoluene	96	69-120				
Bromobenzene	105	70-122				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126747-001	MW-2	29815	09/05/96	09/13/96	09/16/96	
126747-002	MW-6	29815	09/05/96	09/13/96	09/17/96	
126747-003	MW-7	29815	09/05/96	09/13/96	09/17/96	
126747-004	SCI-MW-3	29815	09/05/96	09/13/96	09/17/96	

Matrix: Water

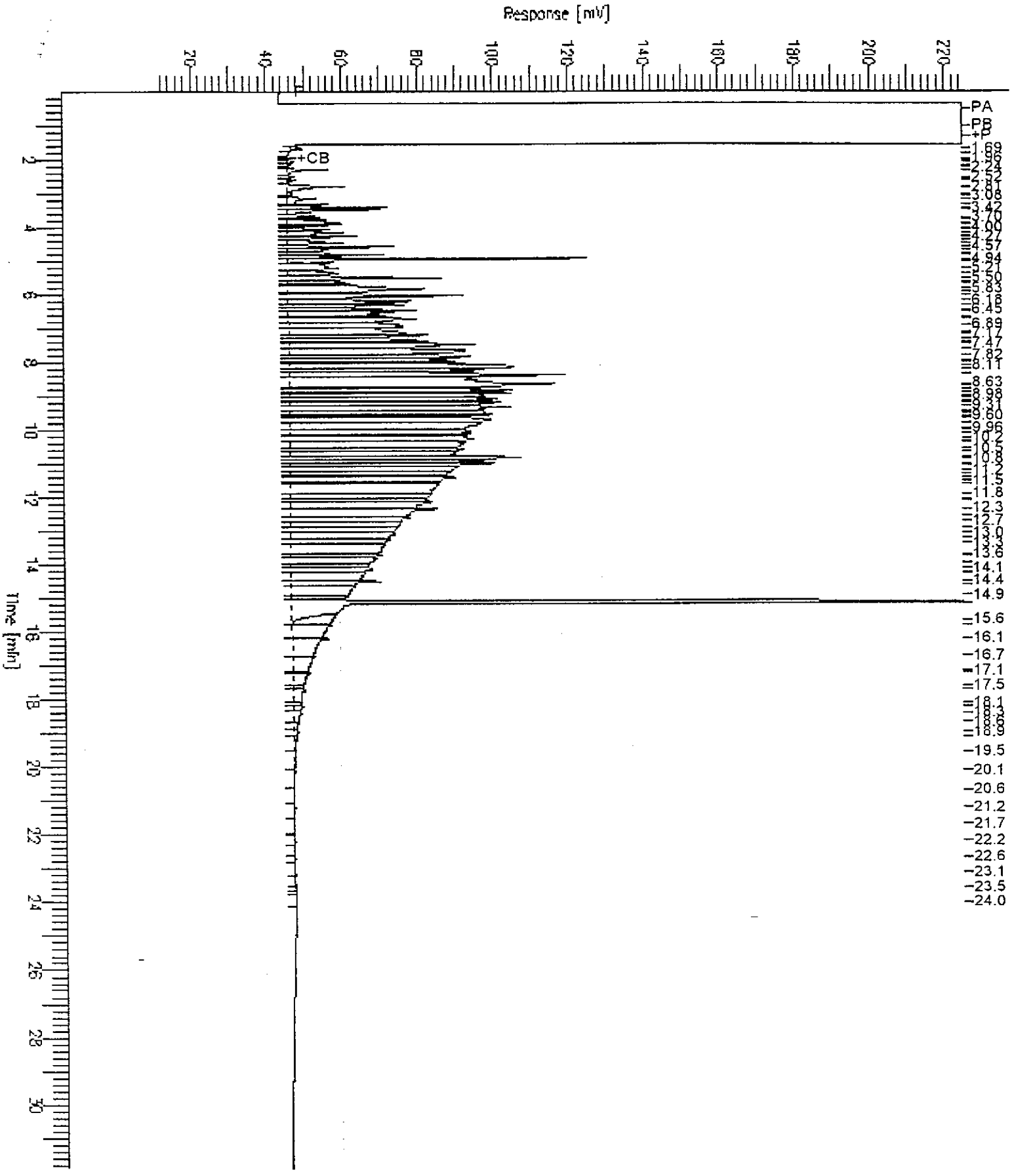
Analyte	Units	126747-001	126747-002	126747-003	126747-004
Diln Fac:		1	3	1	1
Diesel C12-C22	ug/L	2900	50000	480 YH	8800 YH
Motor Oil C22-C50	ug/L	760 YL	3200 YL	310 YL	4400 YL
Surrogate					
Hexacosane	%REC	96	108	97	107

Y: Sample exhibits fuel pattern which does not resemble standard
H: Heavier hydrocarbons than indicated standard
L: Lighter hydrocarbons than indicated standard

GC15 Channel A TEH

Sample Name : W,126747-001
FileName : G:\GC15\CHB\260B021.RAW
Method : 241TEH.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 10 mV

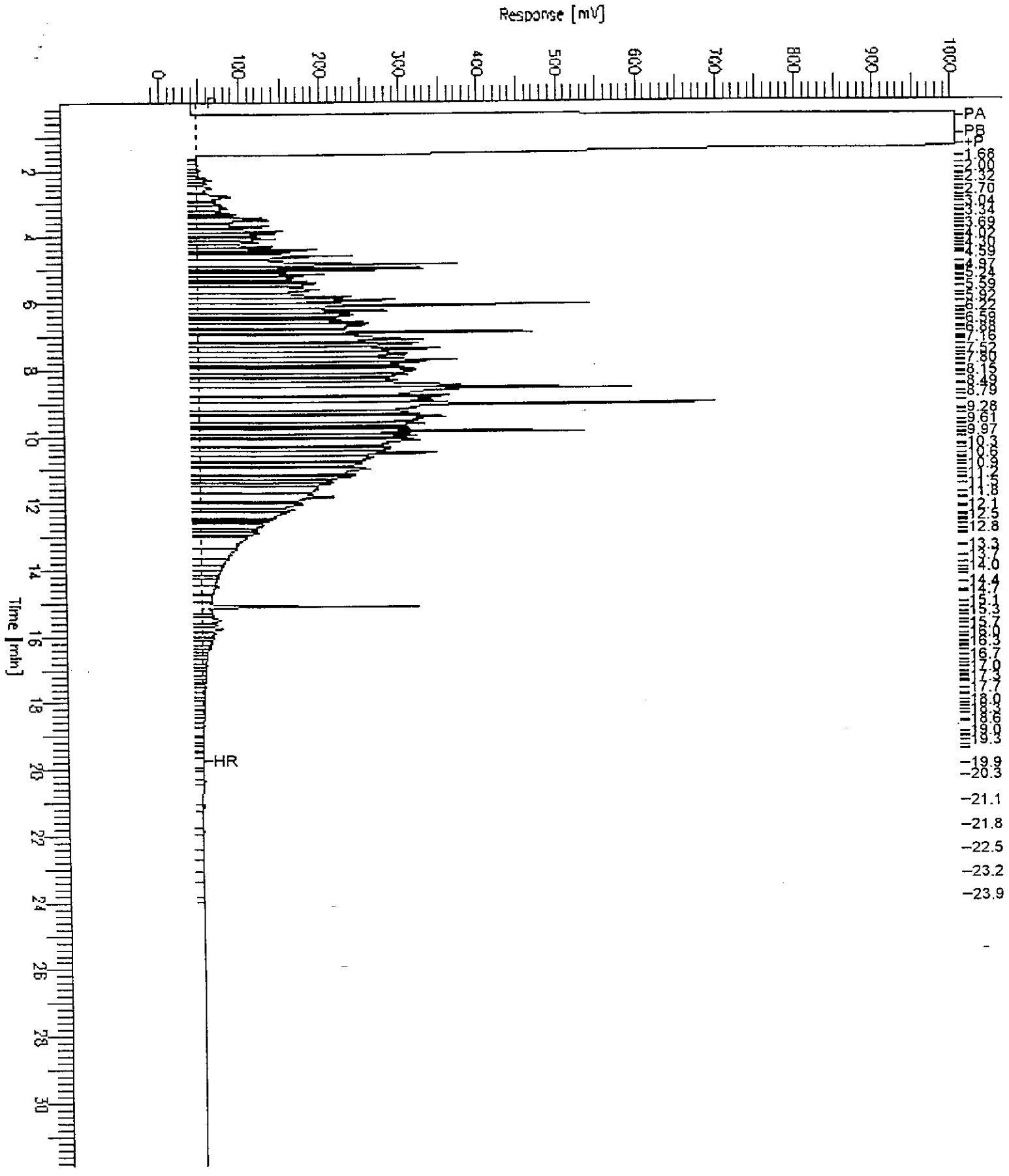
Sample #: 29815 Page 1 of 1
Date : 9/17/96 09:50 AM
Time of Injection: 9/16/96 10:55 PM
Low Point : 10.28 mV High Point : 224.81 mV
Plot Scale: 214.5 mV



GC15 Channel A TEH

Sample Name : W,126747-002
FileName : G:\GC15\CHB\261B005.RAW
Method : 241TEH.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: -11 mV

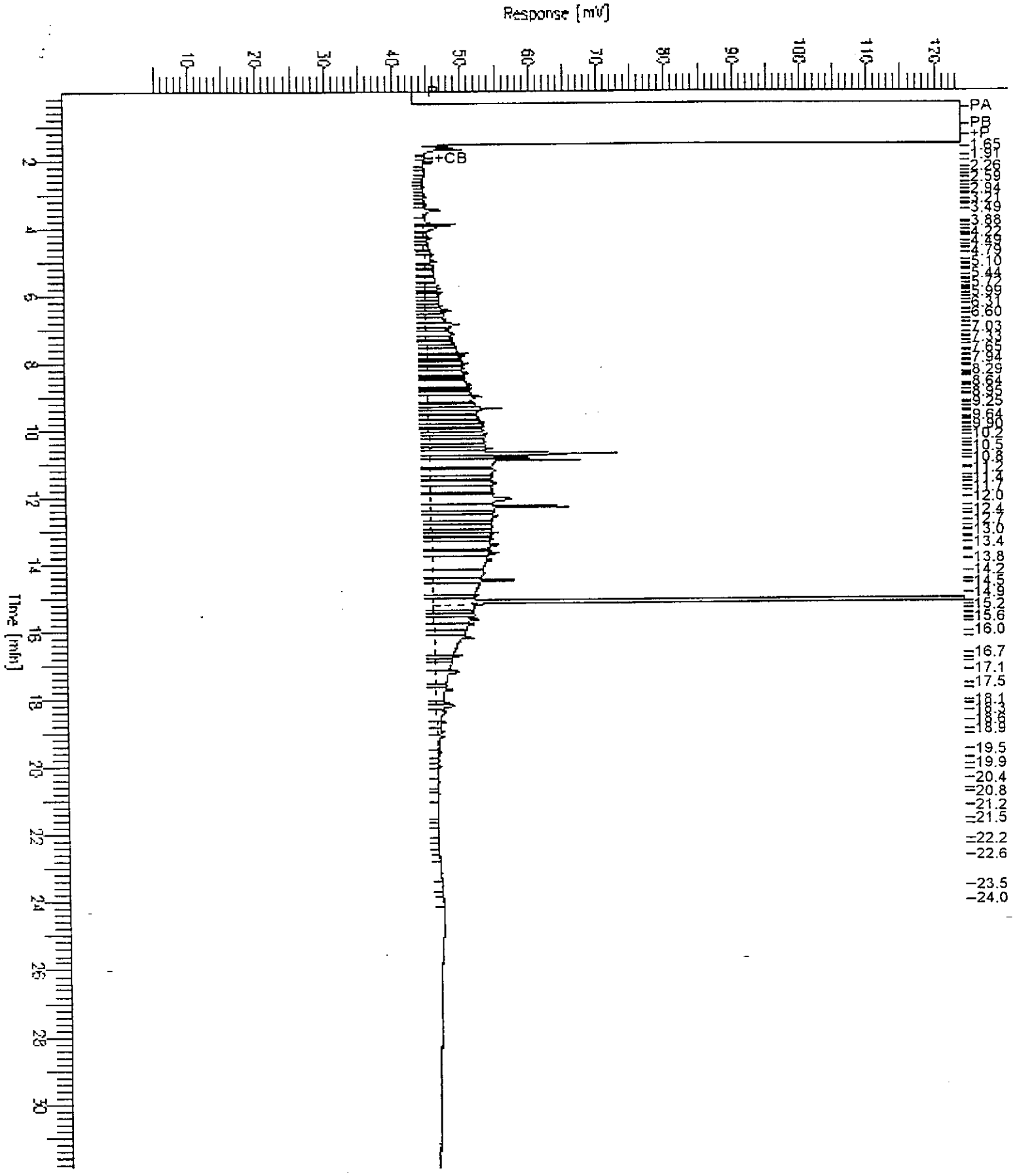
Sample #: 29815
Date : 9/18/96 08:40 AM
Time of Injection: 9/17/96 07:56 PM
Low Point : -10.65 mV High Point : 1005.88 mV
Plot Scale: 1016.5 mV



GC15 Channel A TEH

Sample Name : W,126747-003
FileName : G:\GC15\CHB\2608023.RAW
Method : 241TEH.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 5 mV

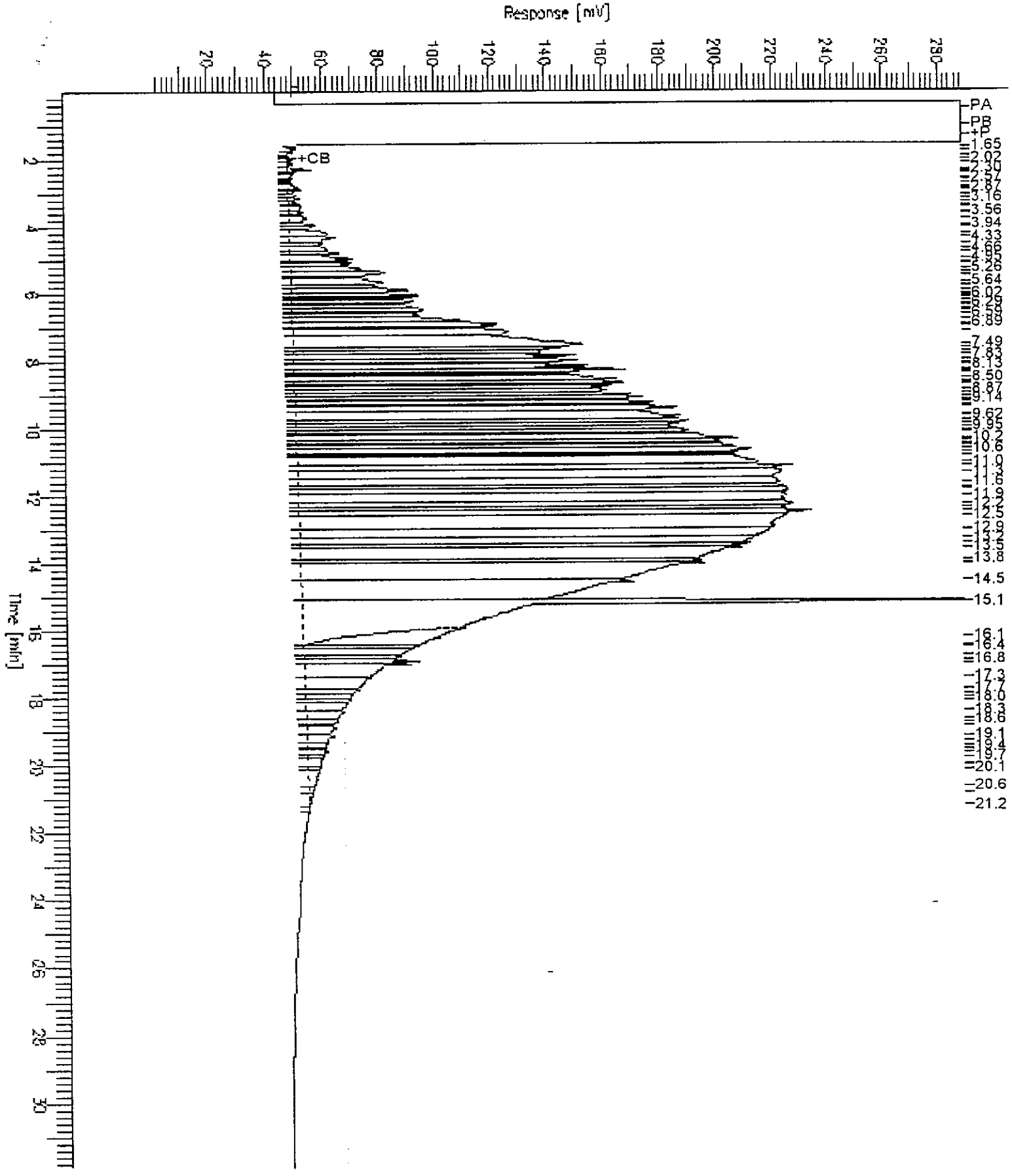
Sample #: 29815 Page 1 of 1
Date : 9/17/96 09:53 AM
Time of Injection: 9/17/96 12:21 AM
Low Point : 4.99 mV High Point : 123.83 mV
Plot Scale: 118.8 mV



GC15 Channel A TEH

Sample Name : W,126747-004
FileName : G:\GC15\CHB\260B024.RAW
Method : 241TEH.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 1 mV

Sample #: 29815 Page 1 of 1
Date : 9/17/96 09:54 AM
Time of Injection: 9/17/96 01:05 AM
Low Point : 1.09 mV High Point : 288.74 mV
Plot Scale: 287.6 mV



Curtis & Tompkins, Ltd.

Lab #: 126747 BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 29815
Units: ug/L
Diln Fac: 1

Prep Date: 09/13/96
Analysis Date: 09/16/96

MB Lab ID: QC30453

Analyte	Result
Diesel C12-C22	<50
Motor Oil C22-C50	<250

Surrogate	%Rec	Recovery Limits
Hexacosane	80	60-140

Curtis & Tompkins, Ltd.

Lab #: 126747

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 29815
Units: ug/L
Diln Fac: 1

Prep Date: 09/13/96
Analysis Date: 09/16/96

BS Lab ID: QC30454

Analyte	Spike Added	BS	%Rec #	Limits
Diesel C12-C22	2475	1612	65	60-140
Surrogate	%Rec	Limits		
Hexacosane	80	60-140		

BSD Lab ID: QC30455

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Diesel C12-C22	2475	1714	69	60-140	6	35
Surrogate	%Rec	Limits				
Hexacosane	86	60-140				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126747-001	MW-2	29639	09/05/96	09/08/96	09/08/96	

Matrix: Water

Analyte	Units	126747-001
Diln Fac:		1
Benzene	ug/L	<0.5
Toluene	ug/L	<0.5
Ethylbenzene	ug/L	<0.5
m,p-Xylenes	ug/L	<0.5
o-Xylene	ug/L	<0.5
Surrogate		
Trifluorotoluene	%REC	98
Bromobenzene	%REC	96

Curtis & Tompkins, Ltd.

Lab #: 126747 BATCH QC REPORT

BTXE	
Client: Subsurface Consultants	Analysis Method: EPA 8020
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

METHOD BLANK	
Matrix: Water	Prep Date: 09/06/96
Batch#: 29639	Analysis Date: 09/06/96
Units: ug/L	
Diln Fac: 1	

MB Lab ID: QC29799

Analyte	Result
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylenes	<0.5
o-Xylene	<0.5

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	103	58-130
Bromobenzene	90	62-131

Curtis & Tompkins, Ltd.

Lab #: 126747 BATCH QC REPORT

BTXE	
Client: Subsurface Consultants	Analysis Method: EPA 8020
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

LABORATORY CONTROL SAMPLE	
Matrix: Water	Prep Date: 09/06/96
Batch#: 29639	Analysis Date: 09/06/96
Units: ug/L	
Diln Fac: 1	

LCS Lab ID: QC29801

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	19.9	20	100	80-120
Toluene	18.3	20	92	80-120
Ethylbenzene	17.3	20	87	80-120
m,p-Xylenes	44.5	40	111	80-120
o-Xylene	18.8	20	94	80-120

Surrogate	%Rec	Limits
Trifluorotoluene	103	58-130
Bromobenzene	91	62-131

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

Field ID: MW-6
Lab ID: 126747-002
Matrix: Water
Batch#: 29895
Units: ug/L
Diln Fac: 1

Sampled: 09/05/96
Received: 09/05/96
Extracted: 09/18/96
Analyzed: 09/18/96

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	5.3	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	95	68-126
Toluene-d8	103	87-125
Bromofluorobenzene	102	79-122

Data File: /chem/VOA_04.i/091896.b/dii23.d
Report Date: 20-Sep-1996 13:06

Curtis & Tompkins Labs

Unknown Compounds Quantitation Report

Data file : /chem/VOA_04.i/091896.b/dii23.d
Lab Smp Id: Client Smp ID: DYNA P&T
Inj Date : 18-SEP-96 20:33
Operator : LLH Inst ID: VOA_04.i
Smp Info : S,126747-002
Misc Info : 8240,,29895,5.0,5,1, WATER
Comment :
Method : /chem/VOA_04.i/091896.b/i4m826.m
Meth Date : 18-Sep-1996 17:57
Cal Date : 13-SEP-96 19:47 Cal File: did15.d
Als bottle: 23
Dil Factor: 1.000 Target Version: 3.10
Integrator: HP RTE Compound Sublist: all.sub
Sample Matrix: WATER
Quantitative Mode : Use RF of Nearest Std

ISTD	RT	AREA	AMOUNT
* 73 1,4-Dichlorobenzene-d4	19.365	13250403	50.000

	CONCENTRATIONS				QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(UG/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Benzene, 1-ethyl-2-methyl-					CAS #: 611-14-3		
17.752	273791	1.03	1.03	95	nbs75k.l	64559	73(ML)
2,3-Dihydro-1-methylindene					CAS #: 27133-93-3		
20.968	3773107	14.24	14.24	94	nbs75k.l	5901	73
2,3-Dihydro-1-methylindene					CAS #: 27133-93-3		
22.124	3851602	14.53	14.53	94	nbs75k.l	5901	73
Benzene, 1,2,3,4-tetramethyl-					CAS #: 488-23-3		
22.280	4320277	16.30	16.30	97	nbs75k.l	6202	73
1H-Indene, 2,3-dihydro-4-methyl-					CAS #: 824-22-6		
22.446	8493720	32.05	32.05	94	nbs75k.l	5893	73
Naphthalene, 1,2,3,4-tetrahydro-					CAS #: 119-64-2		
22.863	7104484	26.81	26.81	96	nbs75k.l	65415	73

Naphthalene 3.1 ug/L quantitated by IS method from 8260 list ie.- quant as a target cmp.

Data File: /chem/VOA_04.i/091896.b/dii23.d
Report Date: 20-Sep-1996 13:06

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(UG/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
1H-Indene, 2,3-dihydro-1,6-dimethyl-					CAS #: 17059-48-2		
22.977	3794351	14.32	14.32	96	nbs75k.l	8967	73
1H-Indene, 2,3-dihydro-1,6-dimethyl-					CAS #: 17059-48-2		
23.279	4749753	17.92	17.92	95	nbs75k.l	8967	73
Naphthalene, 1,2,3,4-tetrahydro-6-methyl					CAS #: 1680-51-9		
24.809	5629107	21.24	21.24	95	nbs75k.l	66500	73
Naphthalene, 1,2,3,4-tetrahydro-6-methyl					CAS #: 1680-51-9		
25.548	3723357	14.05	14.05	94	nbs75k.l	66499	73
Naphthalene, 2-methyl-					CAS #: 91-57-6		
25.829	6361591	24.01	24.01	94	nbs75k.l	66235	73

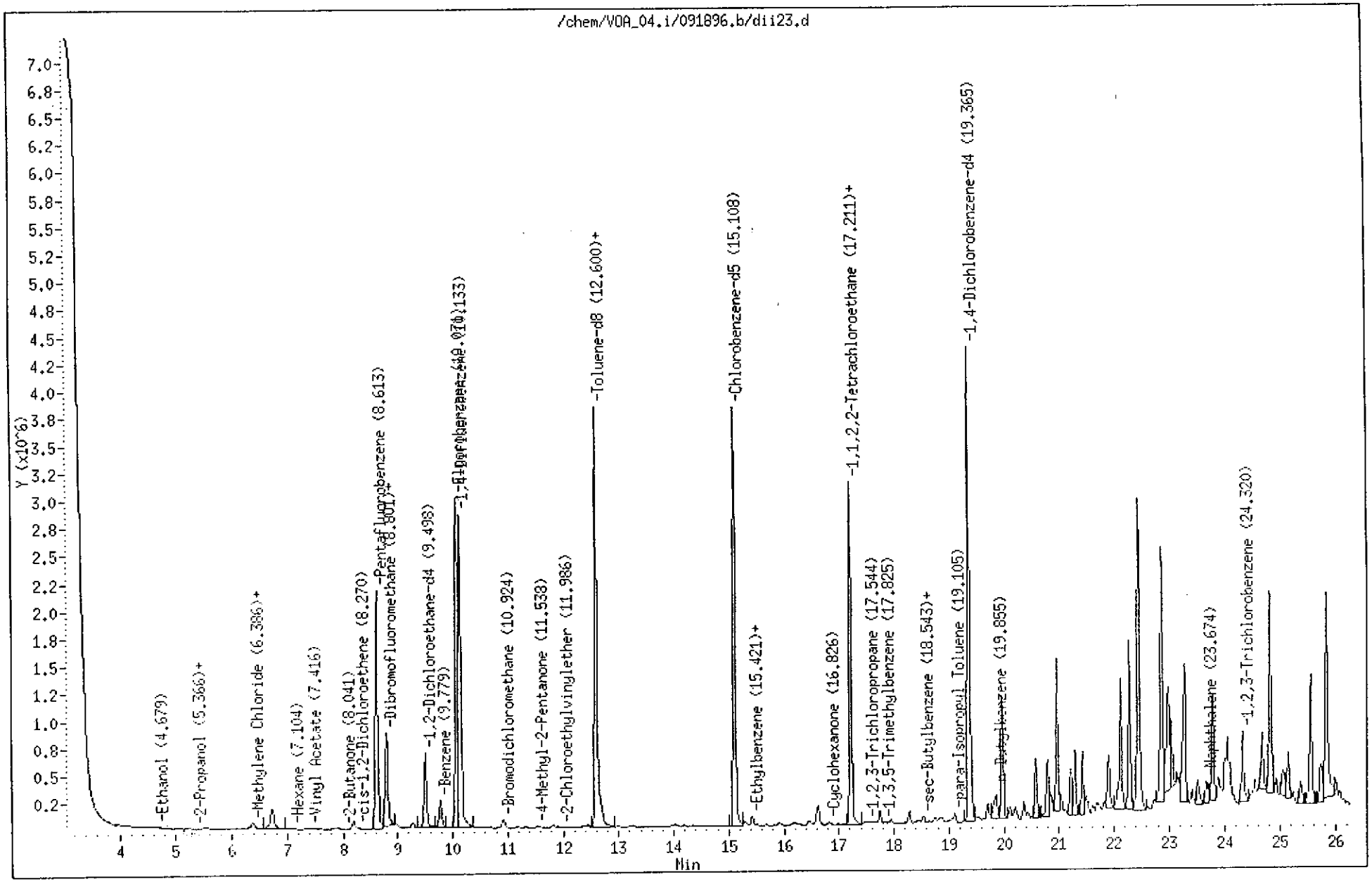
QC Flag Legend

M - Compound response manually integrated.
L - Operator selected an alternate library search match.

Data File: /chem/VOA_04.i/091896.b/dii23.d
Date : 18-SEP-96 20:33
Client ID: DYNA P&T
Sample Info: S,126747-002
Purge Volume: 5.0
Column phase: RTx Volatiles

Instrument: VOA_04.i

Operator: LLH
Column diameter: 0.32



Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

Field ID: MW-7
Lab ID: 126747-003
Matrix: Water
Batch#: 29895
Units: ug/L
Diln Fac: 1

Sampled: 09/05/96
Received: 09/05/96
Extracted: 09/18/96
Analyzed: 09/18/96

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	97	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	101	79-122

Data File: /chem/VOA_04.i/091896.b/dii24.d
Report Date: 19-Sep-1996 08:21

Curtis & Tompkins Labs

Unknown Compounds Quantitation Report

Data file : /chem/VOA_04.i/091896.b/dii24.d
Lab Smp Id: Client Smp ID: DYNA P&T
Inj Date : 18-SEP-96 21:05
Operator : LLH Inst ID: VOA_04.i
Smp Info : S,126747-003
Misc Info : 8240,,29895,5.0,5,1, WATER
Comment :
Method : /chem/VOA_04.i/091896.b/i4m826.m
Meth Date : 18-Sep-1996 17:57
Cal Date : 13-SEP-96 19:47 Cal File: did15.d
Als bottle: 24
Dil Factor: 1.000 Target Version: 3.10
Integrator: HP RTE Compound Sublist: all.sub
Sample Matrix: WATER
Quantitative Mode : Use RF of Nearest Std

ISTD	RT	AREA	AMOUNT
* 73 1,4-Dichlorobenzene-d4	19.363	10322117	50.000

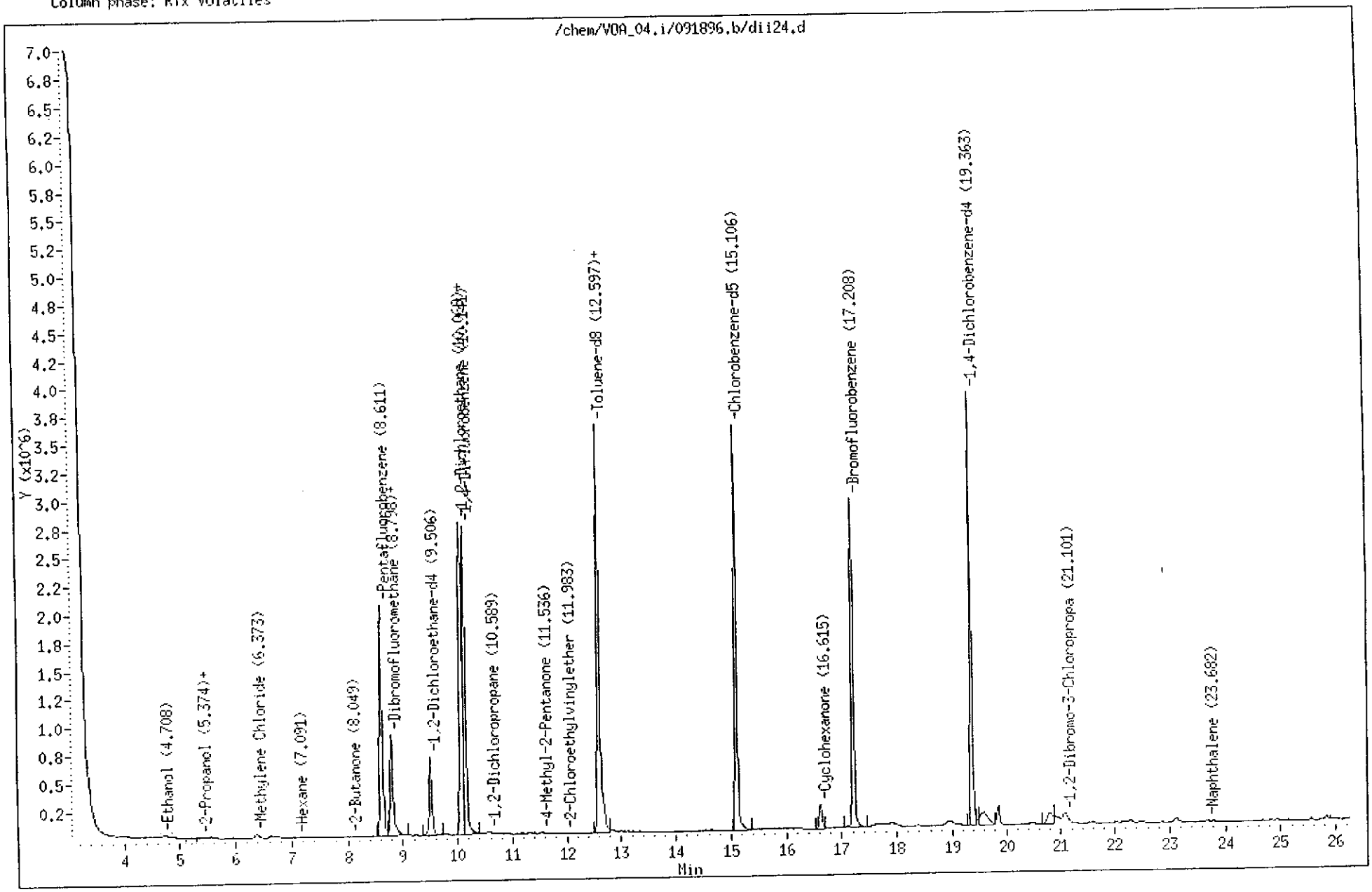
	CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(UG/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Naphthalene, 2,6-dimethyl-			CAS #: 581-42-0				
19.581	1114276	5.40	5.40	98	nbs75k.l	67337	73

✓ 9/20/96

Data File: /chem/VOA_04.i/091896.b/dii24.d
Date : 18-SEP-96 21:05
Client ID: DYNA P&T
Sample Info: S,126747-003
Purge Volume: 5.0
Column phase: RTx Volatiles

Instrument: VOA_04.i

Operator: LLH
Column diameter: 0.32



Volatile Organics by GC/MS

Client:	Subsurface Consultants	Analysis Method:	EPA 8240
Project#:	133.005	Prep Method:	EPA 5030
Location:	KOT		

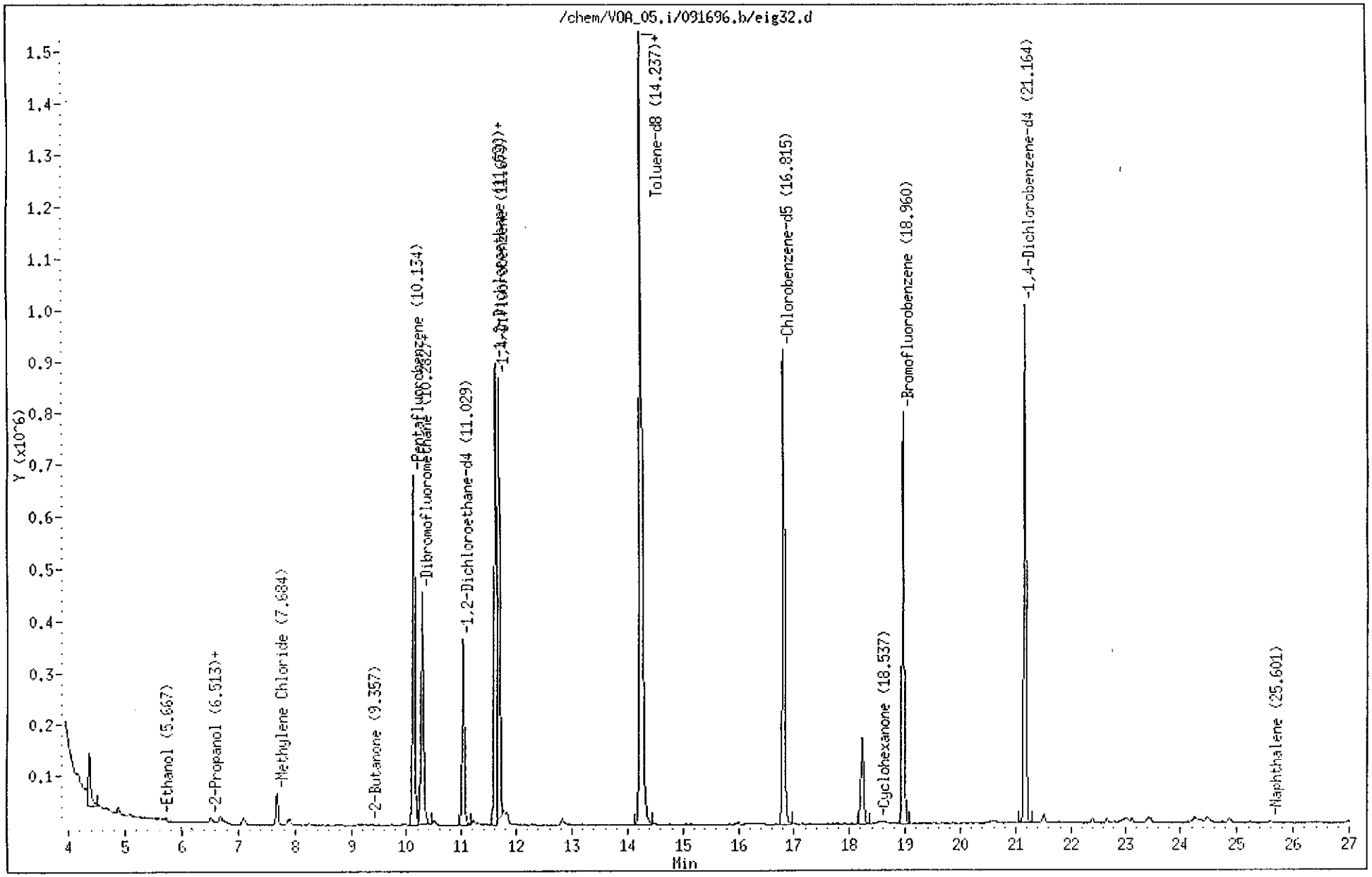
Field ID:	SCI-MW-3	Sampled:	09/05/96
Lab ID:	126747-004	Received:	09/05/96
Matrix:	Water	Extracted:	09/17/96
Batch#:	29856	Analyzed:	09/17/96
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	90	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	91	79-122

Data File: /chem/VOA_05.i/091696.b/eig32.d
Date : 17-SEP-1996 01:37
Client ID: DYNA P&T
Sample Info: MSS,126747-004
Purge Volume: 5.0
Column phase: RTx Volatiles

Instrument: VOA_05.i
Operator: DM
Column diameter: 0.32



Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

Field ID: XB
Lab ID: 126747-005
Matrix: Water
Batch#: 29856
Units: ug/L
Diln Fac: 1

Sampled: 09/05/96
Received: 09/05/96
Extracted: 09/17/96
Analyzed: 09/17/96

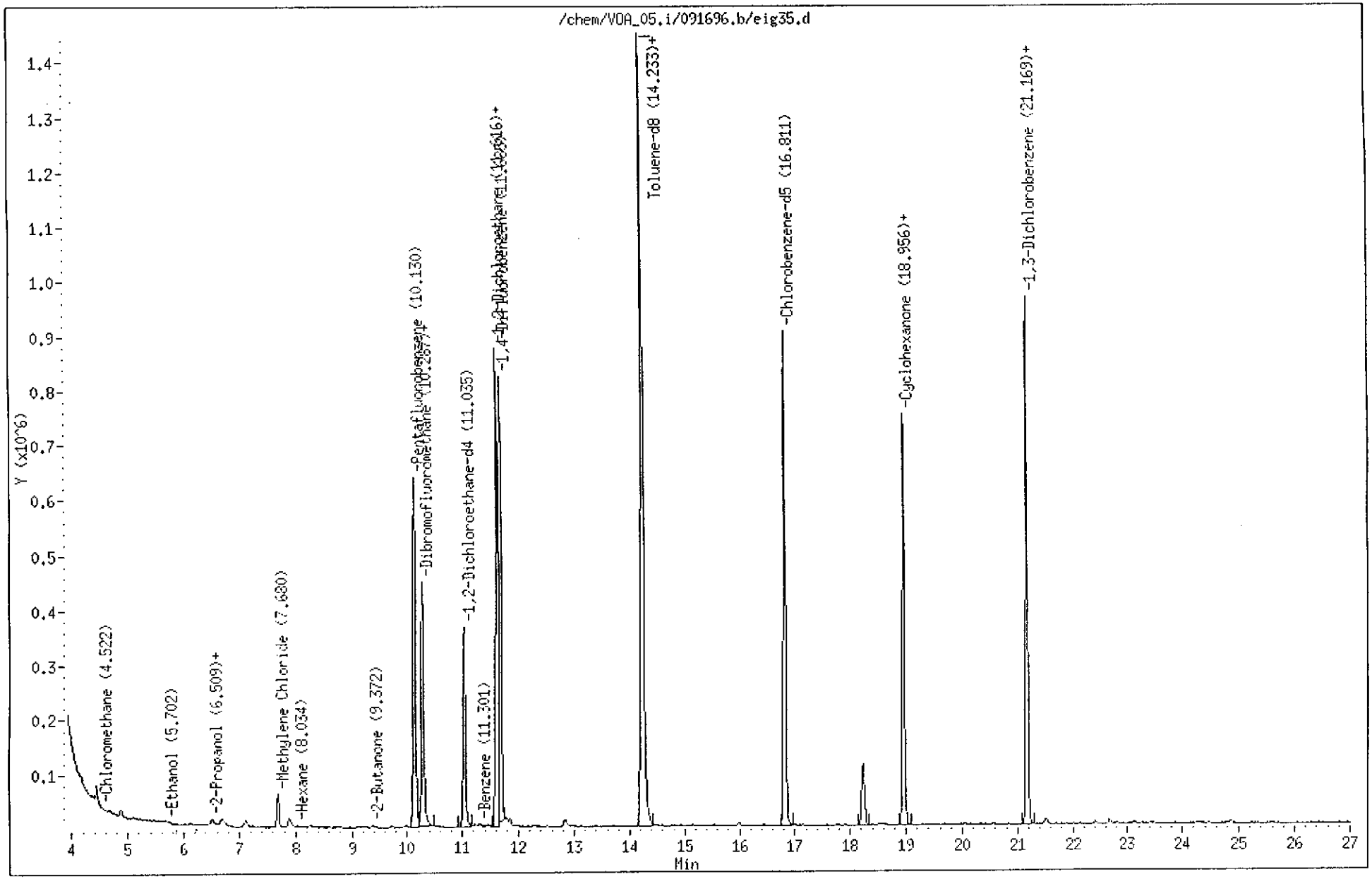
Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	95	68-126
Toluene-d8	96	87-125
Bromofluorobenzene	93	79-122

Data File: /chem/VOA_05.i/091696.b/eig35.d
Date : 17-SEP-1996 03:16
Client ID: DYNA P&T
Sample Info: S,126747-005
Purge Volume: 5.0
Column phase: RTx Volatiles

Instrument: VOA_05.i

Operator: DM
Column diameter: 0.32



Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

Field ID: TRIP BLANK #8
Lab ID: 126747-006
Matrix: Water
Batch#: 29856
Units: ug/L
Diln Fac: 1

Sampled: 09/05/96
Received: 09/05/96
Extracted: 09/16/96
Analyzed: 09/16/96

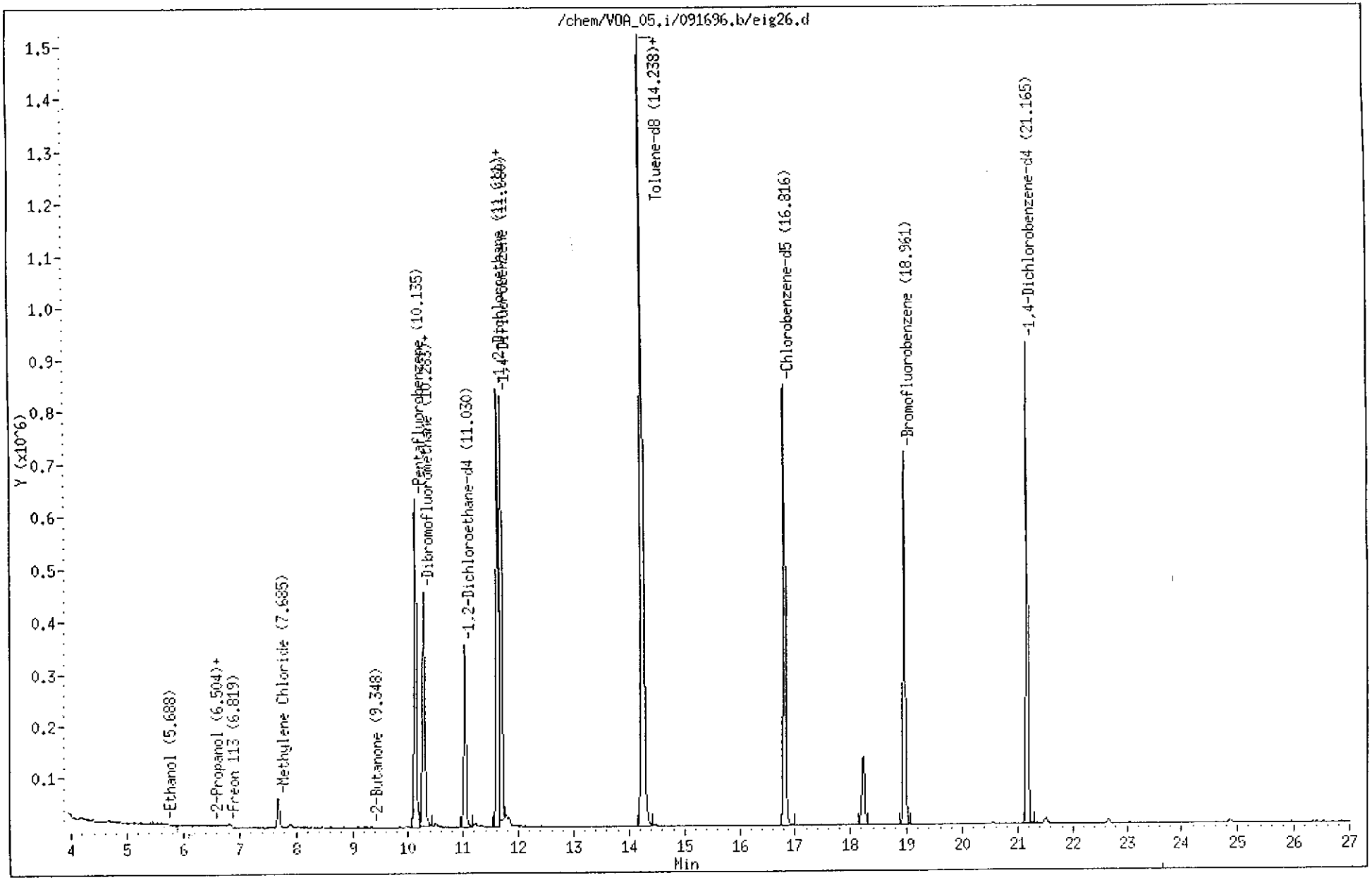
Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	88	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	90	79-122

Data File: /chem/VOA_05.i/091696.b/eig26.d
Date : 16-SEP-1996 22:20
Client ID: DYNA P&T
Sample Info: S,126747-006
Purge Volume: 5.0
Column phase: RTx Volatiles

Instrument: VOA_05.i

Operator: DM
Column diameter: 0.32



Curtis & Tompkins, Ltd.

Lab #: 126747 BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 29856
Units: ug/L
Diln Fac: 1

Prep Date: 09/16/96
Analysis Date: 09/16/96

MB Lab ID: QC30608

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	85	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	88	79-122

Curtis & Tompkins, Ltd.

Lab #: 126747 BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 29895
Units: ug/L
Diln Fac: 1

Prep Date: 09/18/96
Analysis Date: 09/18/96

MB Lab ID: QC30752

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	95	68-126
Toluene-d8	102	87-125
Bromofluorobenzene	105	79-122

Curtis & Tompkins, Ltd.

Lab #: 126747 BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 29895
Units: ug/L
Diln Fac: 1

Prep Date: 09/18/96
Analysis Date: 09/18/96

MB Lab ID: QC30815

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	91	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	106	79-122

Curtis & Tompkins, Ltd.

Lab #: 126747 BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 29856
Units: ug/L
Diln Fac: 1

Prep Date: 09/16/96
Analysis Date: 09/16/96

LCS Lab ID: QC30607

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	51.33	50	103	51-180
Trichloroethene	46.29	50	93	73-141
Benzene	49.57	50	99	78-142
Toluene	46.69	50	93	76-150
Chlorobenzene	48.84	50	98	83-129

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	82	68-126
Toluene-d8	96	87-125
Bromofluorobenzene	89	79-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

Curtis & Tompkins, Ltd.

Lab #: 126747 BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 29895
Units: ug/L
Diln Fac: 1

Prep Date: 09/18/96
Analysis Date: 09/18/96

LCS Lab ID: QC30751

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	54.41	50	109	51-180
Trichloroethene	52.12	50	104	73-141
Benzene	57.61	50	115	78-142
Toluene	57.44	50	115	76-150
Chlorobenzene	57.05	50	114	83-129

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	94	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	103	79-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: SCI-MW-3
Lab ID: 126747-004
Matrix: Water
Batch#: 29856
Units: ug/L
Diln Fac: 1

Sample Date: 09/05/96
Received Date: 09/05/96
Prep Date: 09/17/96
Analysis Date: 09/17/96

MS Lab ID: QC30609

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5	41.55	83	51-180
Trichloroethene	50	<5	42.28	85	73-141
Benzene	50	<5	45.97	92	78-142
Toluene	50	<5	42.17	84	76-150
Chlorobenzene	50	<5	45.29	91	83-129

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	89	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	93	79-122

MSD Lab ID: QC30610

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	42	84	51-180	1	14
Trichloroethene	50	42.72	85	73-141	1	14
Benzene	50	46.43	93	78-142	1	11
Toluene	50	42.42	85	76-150	1	13
Chlorobenzene	50	45.72	91	83-129	1	13

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	89	68-126
Toluene-d8	96	87-125
Bromofluorobenzene	93	79-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 126838-003
Matrix: Water
Batch#: 29895
Units: ug/L
Diln Fac: 1

Sample Date: 09/12/96
Received Date: 09/13/96
Prep Date: 09/18/96
Analysis Date: 09/18/96

MS Lab ID: QC30753

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	0	42.62	85	51-180
Trichloroethene	50	30.44	74.4	88	73-141
Benzene	50	0	51.71	103	78-142
Toluene	50	0.2593	53.66	107	76-150
Chlorobenzene	50	0	51.81	104	83-129

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	90	68-126
Toluene-d8	104	87-125
Bromofluorobenzene	103	79-122

MSD Lab ID: QC30754

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	44.46	89	51-180	4	14
Trichloroethene	50	73.99	87	73-141	1	14
Benzene	50	51.77	104	78-142	0	11
Toluene	50	52.11	104	76-150	3	13
Chlorobenzene	50	51.37	103	83-129	1	13

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	92	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	104	79-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

Field ID: MW-6
Lab ID: 126747-002
Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 50

Sampled: 09/05/96
Received: 09/05/96
Extracted: 09/09/96
Analyzed: 09/18/96

Analyte	Result	Reporting Limit
Phenol	ND	470
2-Chlorophenol	ND	470
Benzyl alcohol	ND	470
2-Methylphenol	ND	470
4-Methylphenol	ND	470
2-Nitrophenol	ND	2400
2,4-Dimethylphenol	ND	470
Benzoic acid	ND	2400
2,4-Dichlorophenol	ND	470
4-Chloro-3-methylphenol	ND	470
2,4,6-Trichlorophenol	ND	470
2,4,5-Trichlorophenol	ND	2400
2,4-Dinitrophenol	ND	2400
4-Nitrophenol	ND	2400
4,6-Dinitro-2-methylphenol	ND	2400
Pentachlorophenol	ND	2400
N-Nitrosodimethylamine	ND	470
Aniline	ND	470
bis(2-Chloroethyl)ether	ND	470
1,3-Dichlorobenzene	ND	470
1,4-Dichlorobenzene	ND	470
1,2-Dichlorobenzene	ND	470
bis(2-Chloroisopropyl) ether	ND	470
N-Nitroso-di-n-propylamine	ND	470
Hexachloroethane	ND	470
Nitrobenzene	ND	470
Isophorone	ND	470
bis(2-Chloroethoxy)methane	ND	470
1,2,4-Trichlorobenzene	ND	470
Naphthalene	ND	470
4-Chloroaniline	ND	470
Hexachlorobutadiene	ND	470
2-Methylnaphthalene	410 J	470
Hexachlorocyclopentadiene	ND	470
2-Chloronaphthalene	ND	470
2-Nitroaniline	ND	2400
Dimethylphthalate	ND	470
Acenaphthylene	ND	470

Semivolatile Organics by GC/MS

Field ID: MW-6
Lab ID: 126747-002
Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 50

Sampled: 09/05/96
Received: 09/05/96
Extracted: 09/09/96
Analyzed: 09/18/96

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	470
3-Nitroaniline	ND	2400
Acenaphthene	ND	470
Dibenzofuran	ND	470
2,4-Dinitrotoluene	ND	470
Diethylphthalate	ND	470
4-Chlorophenyl-phenylether	ND	470
Fluorene	ND	470
4-Nitroaniline	ND	2400
N-Nitrosodiphenylamine	ND	470
Azobenzene	ND	470
4-Bromophenyl-phenylether	ND	470
Hexachlorobenzene	ND	470
Phenanthrene	ND	470
Anthracene	ND	470
Di-n-butylphthalate	ND	470
Fluoranthene	ND	470
Pyrene	ND	470
Butylbenzylphthalate	ND	470
3,3'-Dichlorobenzidine	ND	2400
Benzo(a)anthracene	ND	470
Chrysene	ND	470
bis(2-Ethylhexyl)phthalate	ND	470
Di-n-octylphthalate	ND	470
Benzo(b)fluoranthene	ND	470
Benzo(k)fluoranthene	ND	470
Benzo(a)pyrene	ND	470
Indeno(1,2,3-cd)pyrene	ND	470
Dibenz(a,h)anthracene	ND	470
Benzo(g,h,i)perylene	ND	470

Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	DO*	21-110
Phenol-d5	DO*	10-110
2,4,6-Tribromophenol	DO*	10-123
Nitrobenzene-d5	DO*	35-114
2-Fluorobiphenyl	DO*	43-116
Terphenyl-d14	DO*	33-141

J: Estimated Value
* Values outside of QC limits
DO: Surrogate diluted out

Data File: /chem/bna02.i/091896x.b/11_6747-2d50.d
Report Date: 19-Sep-1996 10:07

Curtis & Tompkins Labs

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: CURTIS & TOMPKINS
Lab Smp Id: dl,126747-002
Operator : dsh
Sample Location:
Sample Matrix: WATER
Analysis Type: SV

Client SDG: 8270
Client Smp ID: CURTIS&TOMPKINS,LTD
Sample Date:
Sample Point:
Date Received:
Level: LOW

Number TICs found: 20

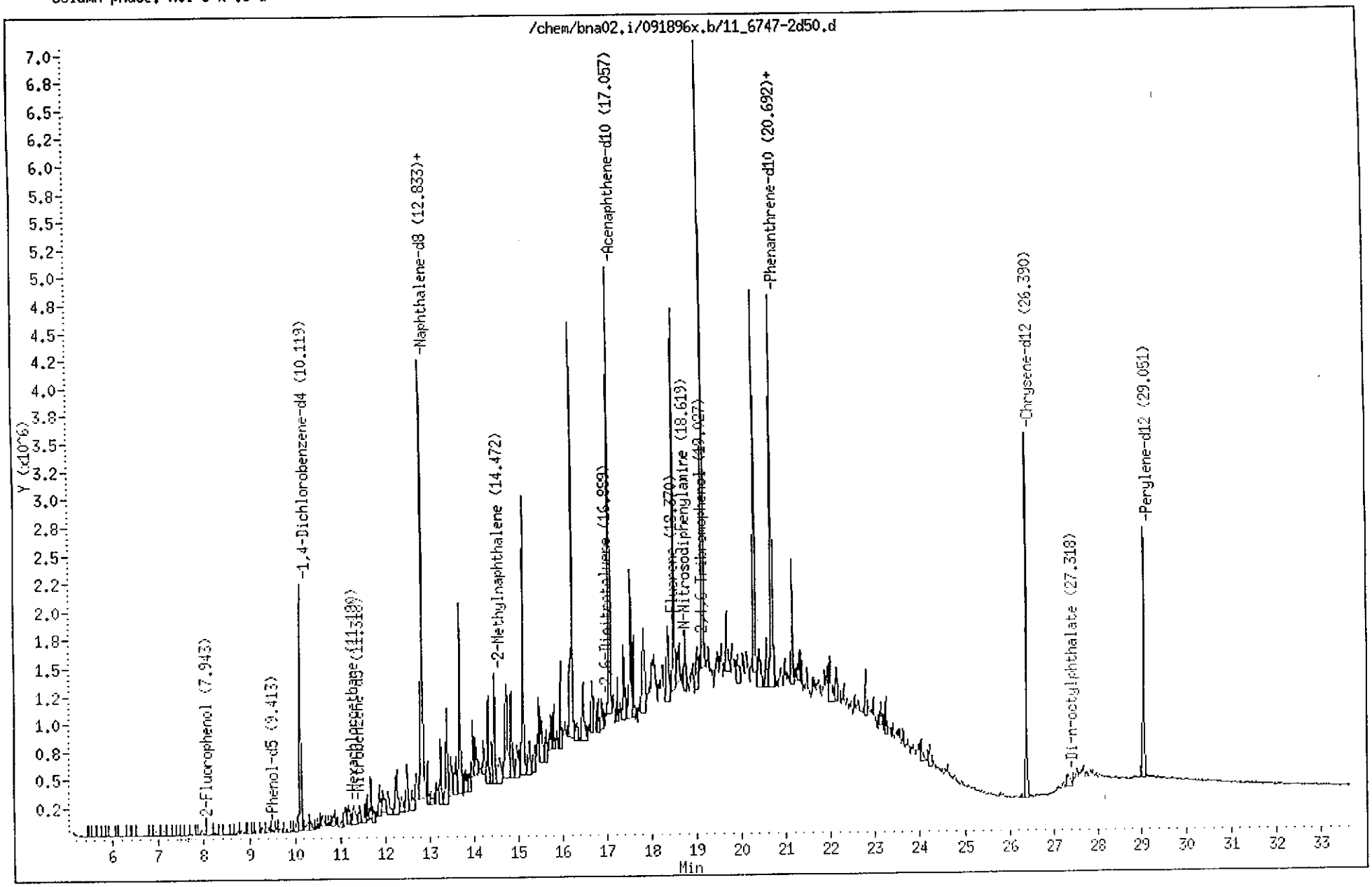
CONCENTRATION UNITS:
(ug/L or ug/KG) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	12.272	283.56	NJ
2.		UNKNOWN	13.395	472.18	NJ
3.		UNKNOWN	13.682	671.31	NJ
4.		UNKNOWN	14.323	331.92	NJ
5.	264-09-5	Benzocycloheptatriene	14.739	664.35	NJ
6.		UNKNOWN	14.838	419.73	NJ
7.	3891-98-3	Dodecane, 2,6,10-trimethyl-	15.115	1102.63	NJ
8.	571-61-9	Naphthalene, 1,5-dimethyl-	15.966	405.58	NJ
9.		UNKNOWN	16.224	1845.89	NJ
10.		UNKNOWN	16.472	429.61	NJ
11.		UNKNOWN	17.375	342.85	NJ
12.		UNKNOWN	17.524	621.51	NJ
13.		UNKNOWN	17.594	316.93	NJ
14.		UNKNOWN	17.813	663.25	NJ
15.	1560-89-0	Heptadecane, 2-methyl-	18.499	1396.02	NJ
16.	1921-70-6	Pentadecane, 2,6,10,14-tetr	19.156	2414.41	NJ
17.		UNKNOWN	19.684	314.75	NJ
18.	31295-56-4	Dodecane, 2,6,11-trimethyl-	20.293	1579.28	NJ
19.		UNKNOWN	20.393	369.47	NJ
20.		UNKNOWN	21.151	508.71	NJ

Data File: /chem/bna02.i/091896x.b/11_6747-2d50.d
Date : 18-SEP-1996 20:38
Client ID: CURTIS&TOMPKINS,LTD
Sample Info:
Volume Injected (uL): 1.0
Column phase: Xti 5 x .5 u

Instrument: bna02.i

Operator: dsh
Column diameter: 0.25



Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

Field ID: MW-7
Lab ID: 126747-003
Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Sampled: 09/05/96
Received: 09/05/96
Extracted: 09/09/96
Analyzed: 09/18/96

Analyte	Result	Reporting Limit
Phenol	ND	9.4
2-Chlorophenol	ND	9.4
Benzyl alcohol	ND	9.4
2-Methylphenol	ND	9.4
4-Methylphenol	ND	9.4
2-Nitrophenol	ND	47
2,4-Dimethylphenol	ND	9.4
Benzoic acid	ND	47
2,4-Dichlorophenol	ND	9.4
4-Chloro-3-methylphenol	ND	9.4
2,4,6-Trichlorophenol	ND	9.4
2,4,5-Trichlorophenol	ND	47
2,4-Dinitrophenol	ND	47
4-Nitrophenol	ND	47
4,6-Dinitro-2-methylphenol	ND	47
Pentachlorophenol	ND	47
N-Nitrosodimethylamine	ND	9.4
Aniline	ND	9.4
bis(2-Chloroethyl)ether	ND	9.4
1,3-Dichlorobenzene	ND	9.4
1,4-Dichlorobenzene	ND	9.4
1,2-Dichlorobenzene	ND	9.4
bis(2-Chloroisopropyl) ether	ND	9.4
N-Nitroso-di-n-propylamine	ND	9.4
Hexachloroethane	ND	9.4
Nitrobenzene	ND	9.4
Isophorone	ND	9.4
bis(2-Chloroethoxy)methane	ND	9.4
1,2,4-Trichlorobenzene	ND	9.4
Naphthalene	ND	9.4
4-Chloroaniline	ND	9.4
Hexachlorobutadiene	ND	9.4
2-Methylnaphthalene	ND	9.4
Hexachlorocyclopentadiene	ND	9.4
2-Chloronaphthalene	ND	47
2-Nitroaniline	ND	9.4
Dimethylphthalate	ND	9.4
Acenaphthylene	ND	

Semivolatile Organics by GC/MS

Field ID:	MW-7	Sampled:	09/05/96
Lab ID:	126747-003	Received:	09/05/96
Matrix:	Water	Extracted:	09/09/96
Batch#:	29694	Analyzed:	09/18/96
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	9.4
3-Nitroaniline	ND	47
Acenaphthene	ND	9.4
Dibenzofuran	ND	9.4
2,4-Dinitrotoluene	ND	9.4
Diethylphthalate	ND	9.4
4-Chlorophenyl-phenylether	ND	9.4
Fluorene	ND	9.4
4-Nitroaniline	ND	47
N-Nitrosodiphenylamine	ND	9.4
Azobenzene	ND	9.4
4-Bromophenyl-phenylether	ND	9.4
Hexachlorobenzene	ND	9.4
Phenanthrene	ND	9.4
Anthracene	ND	9.4
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4
Pyrene	ND	9.4
Butylbenzylphthalate	ND	9.4
3,3'-Dichlorobenzidine	ND	47
Benzo(a)anthracene	ND	9.4
Chrysene	ND	9.4
bis(2-Ethylhexyl)phthalate	ND	9.4
Di-n-octylphthalate	ND	9.4
Benzo(b)fluoranthene	ND	9.4
Benzo(k)fluoranthene	ND	9.4
Benzo(a)pyrene	ND	9.4
Indeno(1,2,3-cd)pyrene	ND	9.4
Dibenz(a,h)anthracene	ND	9.4
Benzo(g,h,i)perylene	ND	9.4

Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	72	21-110
Phenol-d5	78	10-110
2,4,6-Tribromophenol	87	10-123
Nitrobenzene-d5	85	35-114
2-Fluorobiphenyl	81	43-116
Terphenyl-d14	39	33-141

Data File: /chem/bna02.i/091896x.b/07_6747-3re.d
Report Date: 19-Sep-1996 10:06

Curtis & Tompkins Labs

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: CURTIS & TOMPKINS
Lab Smp Id: s,126747-003
Operator : dsh
Sample Location:
Sample Matrix: WATER
Analysis Type: SV

Client SDG: 8270
Client Smp ID: CURTIS&TOMPKINS,LTD
Sample Date:
Sample Point:
Date Received:
Level: LOW

Number TICs found: 1

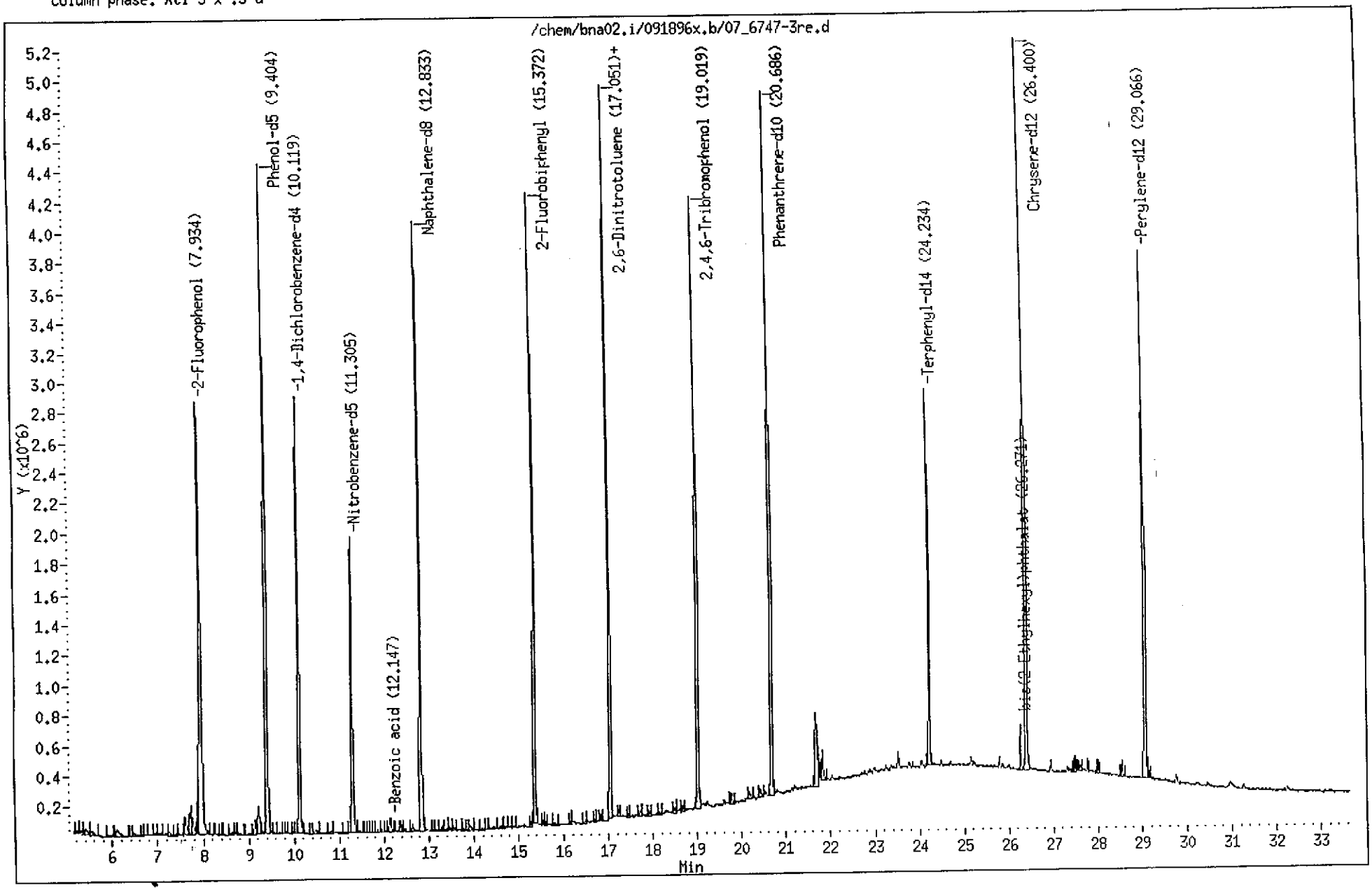
CONCENTRATION UNITS:
(ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	21.685	6.68	NJ

Data File: /chem/bna02.i/091896x.b/07_6747-3re.d
Date : 18-SEP-1996 17:40
Client ID: CURTIS&TOMPKINS,LTD
Sample Info:
Volume Injected (uL): 1.0
Column phase: Xti 5 x .5 u

Instrument: bna02.i

Operator: dsh
Column diameter: 0.25



Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

Field ID: SCI-MW-3
Lab ID: 126747-004
Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Sampled: 09/05/96
Received: 09/05/96
Extracted: 09/09/96
Analyzed: 09/13/96

Analyte	Result	Reporting Limit
Phenol	ND	9.4
2-Chlorophenol	ND	9.4
Benzyl alcohol	ND	9.4
2-Methylphenol	ND	9.4
4-Methylphenol	ND	9.4
2-Nitrophenol	ND	47
2,4-Dimethylphenol	ND	9.4
Benzoic acid	ND	47
2,4-Dichlorophenol	ND	9.4
4-Chloro-3-methylphenol	ND	9.4
2,4,6-Trichlorophenol	ND	9.4
2,4,5-Trichlorophenol	ND	47
2,4-Dinitrophenol	ND	47
4-Nitrophenol	ND	47
4,6-Dinitro-2-methylphenol	ND	47
Pentachlorophenol	ND	47
N-Nitrosodimethylamine	ND	9.4
Aniline	ND	9.4
bis(2-Chloroethyl)ether	ND	9.4
1,3-Dichlorobenzene	ND	9.4
1,4-Dichlorobenzene	ND	9.4
1,2-Dichlorobenzene	ND	9.4
bis(2-Chloroisopropyl) ether	ND	9.4
N-Nitroso-di-n-propylamine	ND	9.4
Hexachloroethane	ND	9.4
Nitrobenzene	ND	9.4
Isophorone	ND	9.4
bis(2-Chloroethoxy)methane	ND	9.4
1,2,4-Trichlorobenzene	ND	9.4
Naphthalene	ND	9.4
4-Chloroaniline	ND	9.4
Hexachlorobutadiene	ND	9.4
2-Methylnaphthalene	ND	9.4
Hexachlorocyclopentadiene	ND	9.4
2-Chloronaphthalene	ND	9.4
2-Nitroaniline	ND	47
Dimethylphthalate	ND	9.4
Acenaphthylene	ND	9.4

Semivolatile Organics by GC/MS

Field ID: SCI-MW-3
Lab ID: 126747-004
Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Sampled: 09/05/96
Received: 09/05/96
Extracted: 09/09/96
Analyzed: 09/13/96

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	9.4
3-Nitroaniline	ND	47
Acenaphthene	ND	9.4
Dibenzofuran	ND	9.4
2,4-Dinitrotoluene	ND	9.4
Diethylphthalate	ND	9.4
4-Chlorophenyl-phenylether	ND	9.4
Fluorene	ND	9.4
4-Nitroaniline	ND	47
N-Nitrosodiphenylamine	ND	9.4
Azobenzene	ND	9.4
4-Bromophenyl-phenylether	ND	9.4
Hexachlorobenzene	ND	9.4
Phenanthrene	ND	9.4
Anthracene	ND	9.4
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4
Pyrene	ND	9.4
Butylbenzylphthalate	ND	9.4
3,3'-Dichlorobenzidine	ND	47
Benzo(a)anthracene	ND	9.4
Chrysene	ND	9.4
bis(2-Ethylhexyl)phthalate	ND	9.4
Di-n-octylphthalate	5.5 J	9.4
Benzo(b)fluoranthene	ND	9.4
Benzo(k)fluoranthene	ND	9.4
Benzo(a)pyrene	ND	9.4
Indeno(1,2,3-cd)pyrene	ND	9.4
Dibenz(a,h)anthracene	ND	9.4
Benzo(g,h,i)perylene	ND	9.4

Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	71	21-110
Phenol-d5	75	10-110
2,4,6-Tribromophenol	79	10-123
Nitrobenzene-d5	69	35-114
2-Fluorobiphenyl	63	43-116
Terphenyl-d14	49	33-141

J: Estimated Value

Data File: /chem/bna02.i/091396x.b/11_6747-004.d
Report Date: 16-Sep-1996 17:00

Curtis & Tompkins Labs

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: CURTIS & TOMPKINS
Lab Smp Id: s,126747-004
Operator : dsh
Sample Location:
Sample Matrix: WATER
Analysis Type: SV

Client SDG: 8270
Client Smp ID: CURTIS&TOMPKINS,LTD
Sample Date:
Sample Point:
Date Received:
Level: LOW

Number TICs found: 16

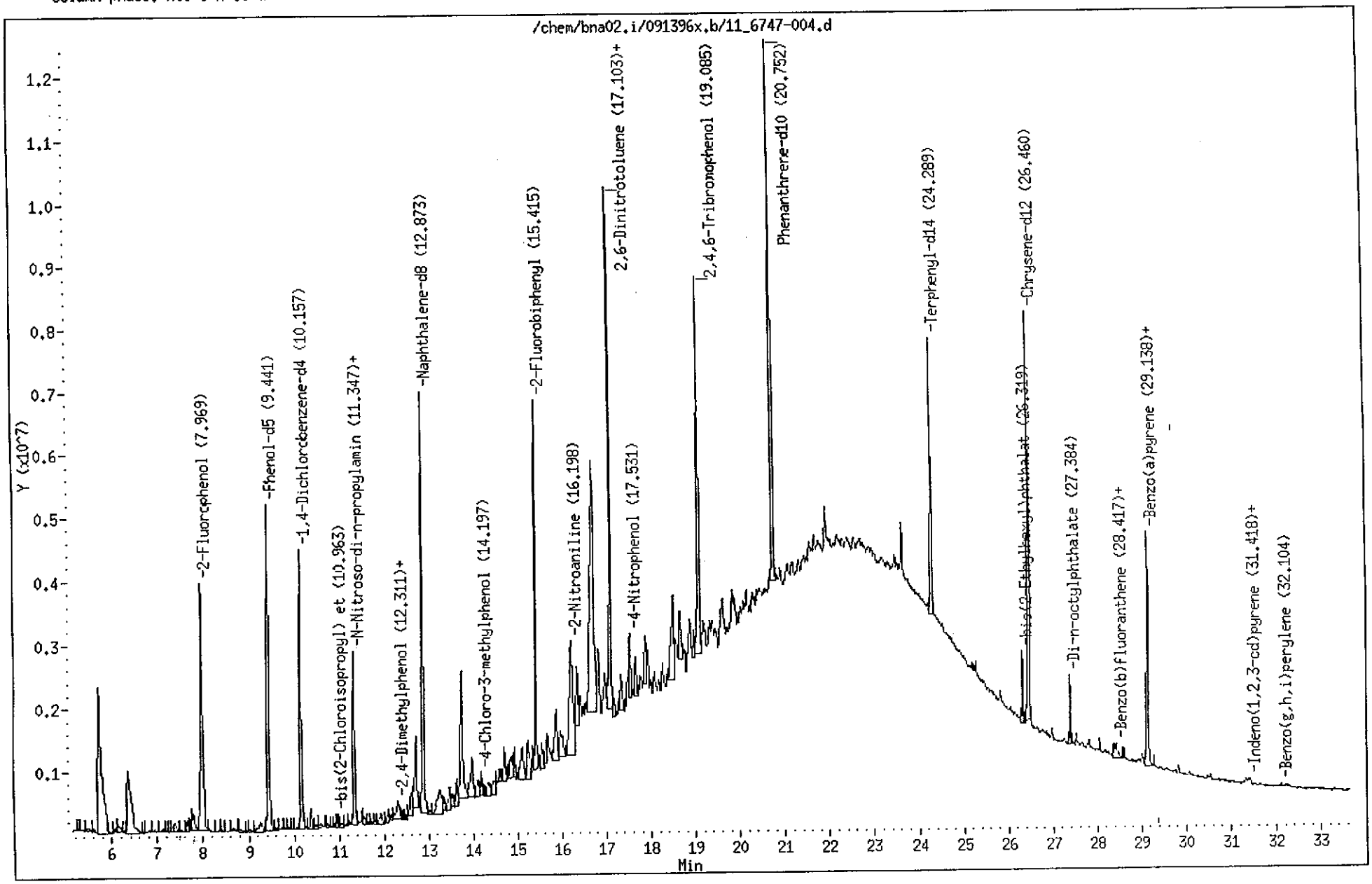
CONCENTRATION UNITS:
(ug/L or ug/KG) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-91-1	1,4-Dioxane	5.733	47.93	NJ
2.	108-11-2	2-Pentanol, 4-methyl-	6.350	24.79	NJ
3.		UNKNOWN	12.725	9.79	NJ
4.		UNKNOWN	13.258	7.35	NJ
5.		UNKNOWN	13.752	18.94	NJ
6.		UNKNOWN	13.980	7.15	NJ
7.		UNKNOWN	15.117	5.72	NJ
8.		UNKNOWN	15.236	5.72	NJ
9.		UNKNOWN	15.871	6.87	NJ
10.		UNKNOWN	15.970	4.46	NJ
11.		UNKNOWN	16.347	6.34	NJ
12.		UNKNOWN	16.705	48.95	NJ
13.		UNKNOWN	17.660	3.77	NJ
14.		UNKNOWN	17.879	5.05	NJ
15.		UNKNOWN	18.497	13.12	NJ
16.		UNKNOWN	18.656	5.77	NJ

Data File: /chem/bna02.i/091396x.b/11_6747-004.d
Date : 13-SEP-1996 20:03
Client ID: CURTIS&TOMPKINS,LTD
Sample Info:
Volume Injected (uL): 1.0
Column phase: Xti 5 x .5 u

Instrument: bna02.i

Operator: dsh
Column diameter: 0.25



EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Prep Date: 09/09/96
Analysis Date: 09/11/96

MB Lab ID: QC29980

Analyte	Result	Reporting Limit
Phenol	ND	10
2-Chlorophenol	ND	10
Benzyl alcohol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	50
2,4-Dimethylphenol	ND	10
Benzoic acid	ND	50
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	50
2,4-Dinitrophenol	ND	50
4-Nitrophenol	ND	50
4,6-Dinitro-2-methylphenol	ND	50
Pentachlorophenol	ND	10
N-Nitrosodimethylamine	ND	10
Aniline	ND	10
bis(2-Chloroethyl)ether	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
1,2-Dichlorobenzene	ND	10
bis(2-Chloroisopropyl) ether	ND	10
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	50
2-Nitroaniline	ND	10
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	50
3-Nitroaniline	ND	

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Prep Date: 09/09/96
Analysis Date: 09/11/96

MB Lab ID: QC29980

Analyte	Result	Reporting Limit
Acenaphthene	ND	10
Dibenzofuran	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	50
N-Nitrosodiphenylamine	ND	10
Azobenzene	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	50
Benzo(a)anthracene	ND	10
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10

Surrogate	%Rec	Recovery Limits
2-Fluorophenol	59	21-110
Phenol-d5	64	10-110
2,4,6-Tribromophenol	49	10-123
Nitrobenzene-d5	61	35-114
2-Fluorobiphenyl	62	43-116
Terphenyl-d14	64	33-141

Curtis & Tompkins, Ltd.

Lab #: 126747 BATCH QC REPORT

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Prep Date: 09/09/96
Analysis Date: 09/11/96

BS Lab ID: QC29981

Analyte	Spike Added	BS	%Rec	#	Limits
Phenol	100	64.31	64		12-110
2-Chlorophenol	100	71.21	71		27-123
4-Chloro-3-methylphenol	100	63.38	63		23-97
4-Nitrophenol	100	50.17	50		10-80
Pentachlorophenol	100	52.23	52		9-103
1,4-Dichlorobenzene	50	29.99	60		36-97
N-Nitroso-di-n-propylamine	50	26.68	53		41-116
1,2,4-Trichlorobenzene	50	29.47	59		39-98
Acenaphthene	50	35.01	70		46-118
2,4-Dinitrotoluene	50	33.25	67		24-96
Pyrene	50	34.66	69		26-127

Surrogate	%Rec	Limits
2-Fluorophenol	66	21-110
Phenol-d5	69	10-110
2,4,6-Tribromophenol	55	10-123
Nitrobenzene-d5	67	35-114
2-Fluorobiphenyl	66	43-116
Terphenyl-d14	69	33-141

BSD Lab ID: QC29982

Analyte	Spike Added	BSD	%Rec	#	Limits	RPD	#	Limit
Phenol	100	61.22	61		12-110	5		42
2-Chlorophenol	100	68.04	68		27-123	5		40
4-Chloro-3-methylphenol	100	62.62	62		23-97	1		42
4-Nitrophenol	100	50.61	51		10-80	1		50
Pentachlorophenol	100	58.26	58		9-103	11		50
1,4-Dichlorobenzene	50	28.88	58		36-97	4		28
N-Nitroso-di-n-propylamine	50	25.86	52		41-116	3		38
1,2,4-Trichlorobenzene	50	28.62	57		39-98	3		28
Acenaphthene	50	34.94	70		46-118	0		31
2,4-Dinitrotoluene	50	33.64	67		24-96	3		38
Pyrene	50	34.51	69		26-127	0		31

Surrogate	%Rec	Limits
2-Fluorophenol	61	21-110
Phenol-d5	65	10-110
2,4,6-Tribromophenol	55	10-123
Nitrobenzene-d5	65	35-114
2-Fluorobiphenyl	65	43-116
Terphenyl-d14	70	33-141

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 11 outside limits
Spike Recovery: 0 out of 22 outside limits
DO: Surrogate diluted out

PCBs

Client:	Subsurface Consultants	Analysis Method:	PCB
Project#:	133.005	Prep Method:	EPA 3520
Location:	KOT		

Field ID:	MW-6	Sampled:	09/05/96
Lab ID:	126747-002	Received:	09/05/96
Matrix:	Water	Extracted:	09/11/96
Batch#:	29758	Analyzed:	09/13/96
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0

Surrogate	%Recovery	Recovery Limits
TCMX	36*	60-150
Decachlorobiphenyl	26*	30-130

* Values outside of QC limits

PCBs

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: PCB
Prep Method: EPA 3520

Field ID: MW-7
Lab ID: 126747-003
Matrix: Water
Batch#: 29758
Units: ug/L
Diln Fac: 1

Sampled: 09/05/96
Received: 09/05/96
Extracted: 09/11/96
Analyzed: 09/13/96

Analyte	Result	Reporting Limit
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0

Surrogate	%Recovery	Recovery Limits
TCMX	56*	60-150
Decachlorobiphenyl	18*	30-130

* Values outside of QC limits

PCBs

Client:	Subsurface Consultants	Analysis Method:	PCB
Project#:	133.005	Prep Method:	EPA 3520
Location:	KOT		

Field ID:	SCI-MW-3	Sampled:	09/05/96
Lab ID:	126747-004	Received:	09/05/96
Matrix:	Water	Extracted:	09/11/96
Batch#:	29758	Analyzed:	09/13/96
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0

Surrogate	%Recovery	Recovery Limits
TCMX	55*	60-150
Decachlorobiphenyl	22*	30-130

* Values outside of QC limits

Curtis & Tompkins, Ltd.

Lab #: 126747 BATCH QC REPORT

Polychlorinated Biphenyls

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: PCB
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 29758
Units: ug/L
Diln Fac: 1

Prep Date: 09/11/96
Analysis Date: 09/13/96

MB Lab ID: QC30243

Analyte	Result	Reporting Limit
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0
Surrogate	**%Rec**	**Recovery Limits**
TCMX	76	60-150
Decachlorobiphenyl	84	30-130

Curtis & Tompkins, Ltd.

Lab #: 126747 BATCH QC REPORT

Polychlorinated Biphenyls

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: PCB
Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 29758
Units: ug/L
Diln Fac: 1

Prep Date: 09/11/96
Analysis Date: 09/13/96

BS Lab ID: QC30244

Analyte	Spike Added	BS	%Rec #	Limits
Aroclor-1260	5	4.09	82	50-128
Surrogate	**%Rec**	**Limits**		
TCMX	63	60-150		
Decachlorobiphenyl	83	30-130		

BSD Lab ID: QC30245

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Aroclor-1260	5	4.11	82	50-128	0	20
Surrogate	**%Rec**	**Limits**				
TCMX	68	60-150				
Decachlorobiphenyl	51	30-130				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

Curtis & Tompkins, Ltd.

Corrective Action Report

2427

From: PCBs - Lara Wheeling Client: Subsurface

Job #: _____ Date: 9-16-96 Time: 1:00

Sample Control	Subcontract	Organics	Metals	Gen. Chem.	Project Management
BREAKAGE	BREAKAGE	TAT	TAT	TAT	REPORT ERROR
VOLUME	LOST	HOLDING TIME	HOLDING TIME	HOLDING TIME	REVIEW ERROR
CONTAINER	VOLUME	QC LIMITS	QC LIMITS	QC LIMITS	INVOICE ERROR
DOCUMENT	TAT	DILUTION	DILUTION	DILUTION	JOB JACKET ERROR
PRESERVATION	HOLDING TIME	WORKSHEET	WORKSHEET	WORKSHEET	COMM. ERROR
LOST	NARRATIVE	ANAL. NOTES	ANAL. NOTES	ANAL. NOTES	OTHER
OTHER	OTHER	OTHER X	OTHER	OTHER	

Description of problem/nonconformance: samples 126747-002, 126747-003, 126747-004 and 126759-003 have failing surrogates in both runs.

Summary of corrective action(s):

~~(1) Re-extract to confirm~~ possible ~~matrix effect~~ CK 9/16/96. LK 9/16/96

(2) Report / Narrate site's demonstrated matrix effects on surrogates.

	YES	NO
Is this a recurring problem?		✓
Should SOP be modified?		✓
Should training be given?	✓	
Should customer be educated?		✓
Should operations be changed?		✓

Resolver	Initials	Date
X Analyst	LW	9-16-96
Group Leader		
P.M.		
QA Officer		
~~Lab Director~~ CT, MC		

Curtis & Tompkins, Ltd.

SAMPLE ID: MW-6
LAB ID: 126747-002
CLIENT: Subsurface Consultants
PROJECT ID: 133.005
LOCATION: KOT
MATRIX: Filtrate

DATE SAMPLED: 09/05/96
DATE RECEIVED: 09/05/96
DATE REPORTED: 09/23/96

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	29688	EPA 6010A	09/11/96
Arsenic	8.9	5.0	1	29688	EPA 6010A	09/11/96
Barium	420	10	1	29688	EPA 6010A	09/11/96
Beryllium	ND	2.0	1	29688	EPA 6010A	09/11/96
Cadmium	ND	2.0	1	29688	EPA 6010A	09/11/96
Chromium (total)	ND	10	1	29688	EPA 6010A	09/11/96
Cobalt	ND	20	1	29688	EPA 6010A	09/11/96
Copper	ND	10	1	29688	EPA 6010A	09/11/96
Lead	3.5	3.0	1	29688	EPA 6010A	09/11/96
Mercury	ND	0.20	1	29868	EPA 7470	09/17/96
Molybdenum	ND	20	1	29688	EPA 6010A	09/11/96
Nickel	ND	20	1	29688	EPA 6010A	09/11/96
Selenium	27	5.0	1	29688	EPA 6010A	09/11/96
Silver	ND	5.0	1	29688	EPA 6010A	09/11/96
Thallium	ND	5.0	1	29688	EPA 6010A	09/11/96
Vanadium	ND	10	1	29688	EPA 6010A	09/11/96
Zinc	ND	20	1	29688	EPA 6010A	09/11/96

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

SAMPLE ID: MW-7
LAB ID: 126747-003
CLIENT: Subsurface Consultants
PROJECT ID: 133.005
LOCATION: KOT
MATRIX: Filtrate

DATE SAMPLED: 09/05/96
DATE RECEIVED: 09/05/96
DATE REPORTED: 09/23/96

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	29688	EPA 6010A	09/11/96
Arsenic	10	5.0	1	29688	EPA 6010A	09/11/96
Barium	78	10	1	29688	EPA 6010A	09/11/96
Beryllium	ND	2.0	1	29688	EPA 6010A	09/11/96
Cadmium	ND	2.0	1	29688	EPA 6010A	09/11/96
Chromium (total)	ND	10	1	29688	EPA 6010A	09/11/96
Cobalt	ND	20	1	29688	EPA 6010A	09/11/96
Copper	ND	10	1	29688	EPA 6010A	09/11/96
Lead	ND	3.0	1	29688	EPA 6010A	09/11/96
Mercury	ND	0.20	1	29868	EPA 7470	09/17/96
Molybdenum	ND	20	1	29688	EPA 6010A	09/11/96
Nickel	ND	20	1	29688	EPA 6010A	09/11/96
Selenium	20	5.0	1	29688	EPA 6010A	09/11/96
Silver	ND	5.0	1	29688	EPA 6010A	09/11/96
Thallium	ND	5.0	1	29688	EPA 6010A	09/11/96
Vanadium	ND	10	1	29688	EPA 6010A	09/11/96
Zinc	ND	20	1	29688	EPA 6010A	09/11/96

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

SAMPLE ID: SCI-MW-3
LAB ID: 126747-004
CLIENT: Subsurface Consultants
PROJECT ID: 133.005
LOCATION: KOT
MATRIX: Filtrate

DATE SAMPLED: 09/05/96
DATE RECEIVED: 09/05/96
DATE REPORTED: 09/23/96

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	29688	EPA 6010A	09/11/96
Arsenic	8.5	5.0	1	29688	EPA 6010A	09/11/96
Barium	170	10	1	29688	EPA 6010A	09/11/96
Beryllium	ND	2.0	1	29688	EPA 6010A	09/11/96
Cadmium	ND	2.0	1	29688	EPA 6010A	09/11/96
Chromium (total)	ND	10	1	29688	EPA 6010A	09/11/96
Cobalt	ND	20	1	29688	EPA 6010A	09/11/96
Copper	ND	10	1	29688	EPA 6010A	09/11/96
Lead	4.6	3.0	1	29688	EPA 6010A	09/11/96
Mercury	ND	0.20	1	29868	EPA 7470	09/17/96
Molybdenum	ND	20	1	29688	EPA 6010A	09/11/96
Nickel	ND	20	1	29688	EPA 6010A	09/11/96
Selenium	31	5.0	1	29688	EPA 6010A	09/11/96
Silver	ND	5.0	1	29688	EPA 6010A	09/11/96
Thallium	ND	5.0	1	29688	EPA 6010A	09/11/96
Vanadium	ND	10	1	29688	EPA 6010A	09/11/96
Zinc	ND	20	1	29688	EPA 6010A	09/11/96

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: Subsurface Consultants
JOB NUMBER: 126747

DATE REPORTED: 09/23/96

BATCH QC REPORT
BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS% Rec.	BSD% Rec.	Rec. Limits	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Antimony	500	507	555	ug/L	101	111	80-120	9	35	29688	EPA 6010A	09/11/96
Arsenic	2000	1940	1970	ug/L	97	99	80-120	2	35	29688	EPA 6010A	09/11/96
Barium	2000	1980	1970	ug/L	99	99	80-120	1	35	29688	EPA 6010A	09/11/96
Beryllium	50	50.4	51.5	ug/L	101	103	80-120	2	35	29688	EPA 6010A	09/11/96
Cadmium	50	52.8	53.1	ug/L	106	106	80-120	1	35	29688	EPA 6010A	09/11/96
Chromium (total)	200	198	199	ug/L	99	100	80-120	1	35	29688	EPA 6010A	09/11/96
Cobalt	500	492	507	ug/L	98	101	80-120	3	35	29688	EPA 6010A	09/11/96
Copper	250	249	248	ug/L	100	99	80-120	0	35	29688	EPA 6010A	09/11/96
Lead	500	505	520	ug/L	101	104	80-120	3	35	29688	EPA 6010A	09/11/96
Mercury	5	5.427	5.612	ug/L	109	112	80-120	3	35	29868	EPA 7470	09/17/96
Molybdenum	400	406	414	ug/L	102	104	80-120	2	35	29688	EPA 6010A	09/11/96
Nickel	500	507	516	ug/L	101	103	80-120	2	35	29688	EPA 6010A	09/11/96
Selenium	2000	2020	2040	ug/L	101	102	80-120	1	35	29688	EPA 6010A	09/11/96
Silver	100	90.4	89.7	ug/L	90	90	80-120	1	35	29688	EPA 6010A	09/11/96
Thallium	2000	2040	2070	ug/L	102	104	80-120	2	35	29688	EPA 6010A	09/11/96
Vanadium	500	495	498	ug/L	99	100	80-120	1	35	29688	EPA 6010A	09/11/96
Zinc	500	480	493	ug/L	96	99	80-120	3	35	29688	EPA 6010A	09/11/96

Curtis & Tompkins, Ltd.

CLIENT: Subsurface Consultants
JOB NUMBER: 126747

DATE REPORTED: 09/23/96

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	ug/L	1	29688	EPA 6010A	09/11/96
Arsenic	ND	5	ug/L	1	29688	EPA 6010A	09/11/96
Barium	ND	10	ug/L	1	29688	EPA 6010A	09/11/96
Beryllium	ND	2	ug/L	1	29688	EPA 6010A	09/11/96
Cadmium	ND	2	ug/L	1	29688	EPA 6010A	09/11/96
Chromium (total)	ND	10	ug/L	1	29688	EPA 6010A	09/11/96
Cobalt	ND	20	ug/L	1	29688	EPA 6010A	09/11/96
Copper	ND	10	ug/L	1	29688	EPA 6010A	09/11/96
Lead	ND	3	ug/L	1	29688	EPA 6010A	09/11/96
Mercury	ND	0.2	ug/L	1	29868	EPA 7470	09/17/96
Molybdenum	ND	20	ug/L	1	29688	EPA 6010A	09/11/96
Nickel	ND	20	ug/L	1	29688	EPA 6010A	09/11/96
Selenium	ND	5	ug/L	1	29688	EPA 6010A	09/11/96
Silver	ND	5	ug/L	1	29688	EPA 6010A	09/11/96
Thallium	ND	5	ug/L	1	29688	EPA 6010A	09/11/96
Vanadium	ND	10	ug/L	1	29688	EPA 6010A	09/11/96
Zinc	ND	20	ug/L	1	29688	EPA 6010A	09/11/96

ND = Not Detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: Subsurface Consultants
JOB NUMBER: 126747

DATE REPORTED: 09/23/96

BATCH QC REPORT
SAMPLE DUPLICATE

Compound	Sample	Sample Result	Duplicate Result	Units	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Antimony	126699-001	<60.000	<60.000	ug/L	NC	20	29688	EPA 6010A	09/11/96
Arsenic	126699-001	14	8.56	ug/L	48*	20	29688	EPA 6010A	09/11/96
Barium	126699-001	295	281	ug/L	5	20	29688	EPA 6010A	09/11/96
Beryllium	126699-001	3.07	<2.000	ug/L	NC	20	29688	EPA 6010A	09/11/96
Cadmium	126699-001	<2.000	<2.000	ug/L	NC	20	29688	EPA 6010A	09/11/96
Chromium (total)	126699-001	<10.000	<10.000	ug/L	NC	20	29688	EPA 6010A	09/11/96
Cobalt	126699-001	<20.000	<20.000	ug/L	NC	20	29688	EPA 6010A	09/11/96
Copper	126699-001	<10.000	<10.000	ug/L	NC	20	29688	EPA 6010A	09/11/96
Lead	126699-001	<3.000	<3.000	ug/L	NC	20	29688	EPA 6010A	09/11/96
Mercury	126810-025	<0.200	<0.200	ug/L	NC	20	29868	EPA 7470	09/17/96
Molybdenum	126699-001	<20.000	<20.000	ug/L	NC	20	29688	EPA 6010A	09/11/96
Nickel	126699-001	<20.000	<20.000	ug/L	NC	20	29688	EPA 6010A	09/11/96
Selenium	126699-001	39.7	25.5	ug/L	44*	20	29688	EPA 6010A	09/11/96
Silver	126699-001	<5.000	<5.000	ug/L	NC	20	29688	EPA 6010A	09/11/96
Thallium	126699-001	<5.000	<5.000	ug/L	NC	20	29688	EPA 6010A	09/11/96
Vanadium	126699-001	11.7	<10.000	ug/L	NC	20	29688	EPA 6010A	09/11/96
Zinc	126699-001	<20.000	<20.000	ug/L	NC	20	29688	EPA 6010A	09/11/96

* = Out of Limits
NC = Not Calculable

Curtis & Tompkins, Ltd.

CLIENT: Subsurface Consultants
JOB NUMBER: 126747

DATE REPORTED: 09/23/96

BATCH QC REPORT
SAMPLE SPIKE

Compound	Spike Amount	Sample	Sample Result	Spike Result	Units	Percent Rec.	Rec. Limit	QC Batch	Method	Analysis Date
Antimony	500	126699-001	<60.000	490	ug/L	98	75-125	29688	EPA 6010A	09/11/96
Arsenic	2000	126699-001	14	1610	ug/L	80	75-125	29688	EPA 6010A	09/11/96
Barium	2000	126699-001	295	2170	ug/L	94	75-125	29688	EPA 6010A	09/11/96
Beryllium	50	126699-001	3.07	43	ug/L	80	75-125	29688	EPA 6010A	09/11/96
Cadmium	50	126699-001	<2.000	43.4	ug/L	87	75-125	29688	EPA 6010A	09/11/96
Chromium (total)	200	126699-001	<10.000	183	ug/L	92	75-125	29688	EPA 6010A	09/11/96
Cobalt	500	126699-001	<20.000	444	ug/L	89	75-125	29688	EPA 6010A	09/11/96
Copper	250	126699-001	<10.000	310	ug/L	124	75-125	29688	EPA 6010A	09/11/96
Lead	500	126699-001	<3.000	463	ug/L	93	75-125	29688	EPA 6010A	09/11/96
Mercury	5	126810-025	<0.200	5.739	ug/L	115	75-125	29868	EPA 7470	09/17/96
Molybdenum	400	126699-001	<20.000	336	ug/L	84	75-125	29688	EPA 6010A	09/11/96
Nickel	500	126699-001	<20.000	469	ug/L	94	75-125	29688	EPA 6010A	09/11/96
Selenium	2000	126699-001	39.7	1880	ug/L	92	75-125	29688	EPA 6010A	09/11/96
Silver	100	126699-001	<5.000	106	ug/L	106	75-125	29688	EPA 6010A	09/11/96
Thallium	2000	126699-001	<5.000	1590	ug/L	80	75-125	29688	EPA 6010A	09/11/96
Vanadium	500	126699-001	11.7	456	ug/L	89	75-125	29688	EPA 6010A	09/11/96
Zinc	500	126699-001	<20.000	442	ug/L	88	75-125	29688	EPA 6010A	09/11/96

CHAIN OF CUSTODY FORM

126747

PAGE 1 OF 1

PROJECT NAME: KOT

JOB NUMBER: 133.005 LAB: Curtis & Tompkins

PROJECT CONTACT: Jeri Alexander/Meg Mendoza TURNAROUND: Normal

SAMPLED BY: Dennis Alexander REQUESTED BY: Jeri Alexander/Meg Mendoza

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX: WATER	SOIL	WASTE	AIR	CONTAINERS: VOA	LITER	PINT	TUBE	METHOD PRESERVED: HCL	H_2SO_4	HNO_3	ICE	NONE	SAMPLING DATE: MONTH	DAY	YEAR	TIME	NOTES	ANALYSIS REQUESTED: TVH @ gas	BTXE	TEH @ diesel + motor oil	VOCs (8240) w/ library search	SVOCs (8270) including PAHs	OWG	Heavy Metals	POBs
-1	MW-2	X				3	1			X			X		09	05	96	1100		X	X	X					
-2	MW-6	X				5	5			X			X					1030	*	X		X	X	X	X	X	X
-3	MW-7	X				5	5			X			X					1130	*	X		X	X	X	X	X	X
-4	SCI-MW-3	X				5	5			X			X					1345	*	X		X	X	X	X	X	X
-5	XB	X				3				X			X		09	05	96	1345					X				
-6	Trip Blank #8	X				1							X										X				

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
Dennis Alexander	9/5/96 2:45 p.m.		9/5/96 1450
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME

COMMENTS & NOTES: * Please filter & fix before metals analysis

Subsurface Consultants, Inc.

171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607

(510) 268-0461 • FAX: 510-268-0137

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Lafayette, CA 94549

Date: 26-SEP-96
Lab Job Number: 126881
Project ID: 133.005
Location: KOT

Reviewed by: _____

Reviewed by: _____

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126881-005	MW-3	30026	09/18/96	09/25/96	09/25/96	

Matrix: Water

Analyte	Units	126881-005
Diln Fac:		1
Gasoline	ug/L	<50
Surrogate		
Trifluorotoluene	%REC	103
Bromobenzene	%REC	91

Curtis & Tompkins, Ltd.

Lab #: 126881

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client:	Subsurface Consultants	Analysis Method:	CA LUFT (EPA 8015M)
Project#:	133.005	Prep Method:	EPA 5030
Location:	KOT		

METHOD BLANK

Matrix:	Water	Prep Date:	09/25/96
Batch#:	30026	Analysis Date:	09/25/96
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC31239

Analyte	Result	
Gasoline	<50	
Surrogate	**%Rec**	**Recovery Limits**
Trifluorotoluene	101	69-120
Bromobenzene	90	70-122

Curtis & Tompkins, Ltd.

Lab #: 126881

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 30026
Units: ug/L
Diln Fac: 1

Prep Date: 09/25/96
Analysis Date: 09/25/96

LCS Lab ID: QC31237

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	1889	2000	94	80-120
Surrogate	**%Rec**	**Limits**		
Trifluorotoluene	102	69-120		
Bromobenzene	113	70-122		

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

Lab #: 126881

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 126864-001
Matrix: Water
Batch#: 30026
Units: ug/L
Diln Fac: 1

Sample Date: 09/16/96
Received Date: 09/17/96
Prep Date: 09/25/96
Analysis Date: 09/25/96

MS Lab ID: QC31254

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	2000	<50	1584	79	75-125
Surrogate	**%Rec**	**Limits**			
Trifluorotoluene	98	69-120			
Bromobenzene	113	70-122			

MSD Lab ID: QC31255

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	2000	1576	79	75-125	1	20
Surrogate	**%Rec**	**Limits**				
Trifluorotoluene	97	69-120				
Bromobenzene	114	70-122				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126881-005	MW-3	29948	09/18/96	09/19/96	09/23/96	

Matrix: Water

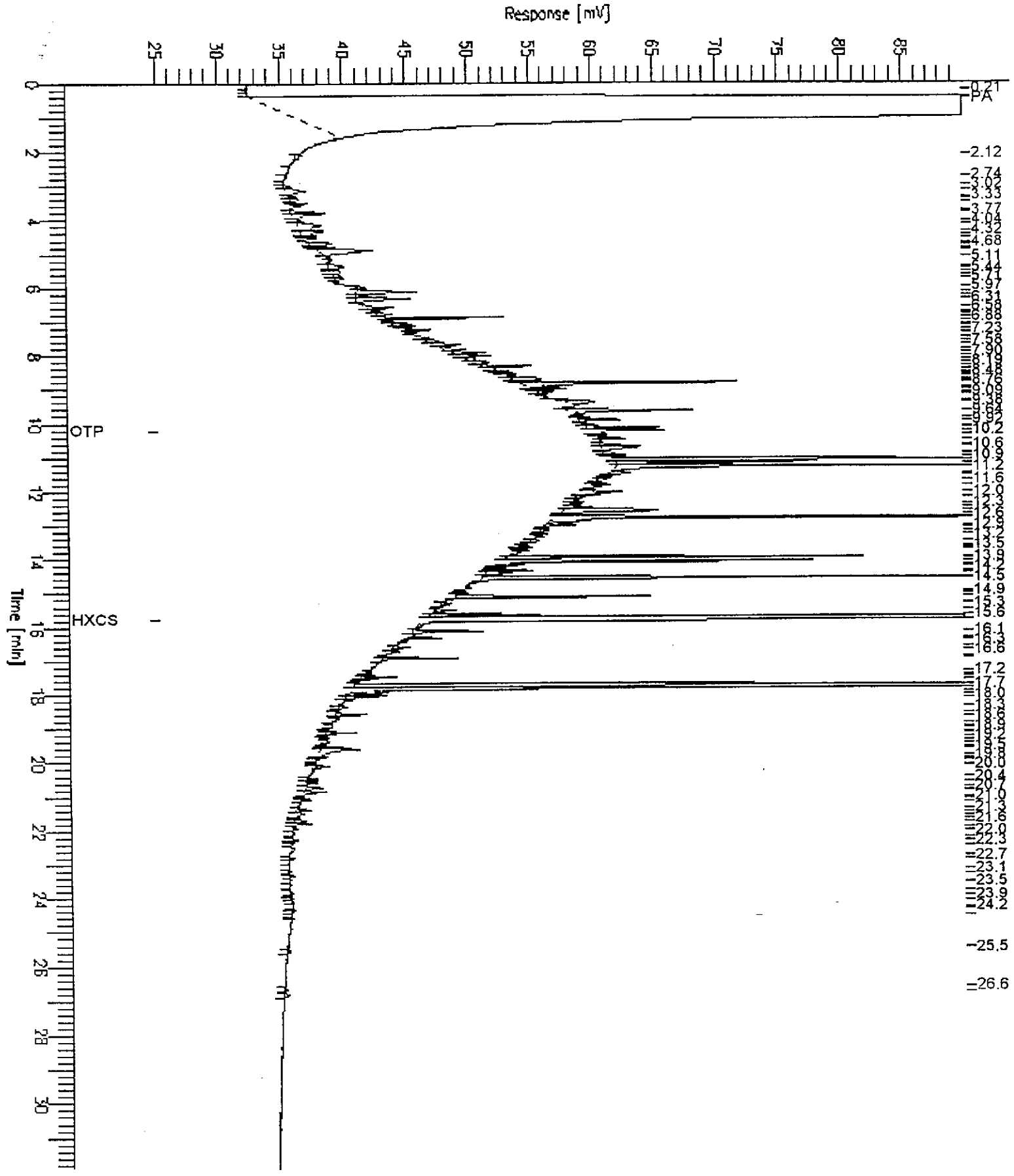
Analyte	Units	126881-005	
Dilu Fac:		1	
Diesel C12-C22	ug/L	1500	
Motor Oil C22-C50	ug/L	890	YL
Surrogate			
Hexacosane	%REC	91	

Y: Sample exhibits fuel pattern which does not resemble standard
L: Lighter hydrocarbons than indicated standard

Chromatogram

Sample Name : 126881-005,29948
FileName : G:\GC13\CHA\267A011.raw
Method : DUAL
Start Time : 0.00 min End Time : 31.90 min
Scale Factor: 0.0 Plot Offset: 25 mV

Sample #: 500:2.5 Page 1 of 1
Date : 9/23/96 07:09 PM
Time of Injection: 9/23/96 06:37 PM
Low Point : 25.00 mV High Point : 90.00 mV
Plot Scale: 65.0 mV



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 29948
Units: ug/L
Diln Fac: 1

Prep Date: 09/19/96
Analysis Date: 09/23/96

MB Lab ID: QC30952

Analyte	Result
Diesel C12-C22	<50
Motor Oil C22-C50	<250

Surrogate	%Rec	Recovery Limits
Hexacosane	100	60-140

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 29948
Units: ug/L
Diln Fac: 1

Prep Date: 09/19/96
Analysis Date: 09/23/96

BS Lab ID: QC30953

Analyte	Spike Added	BS	%Rec #	Limits
Diesel C12-C22	2475	1697	69	60-140
Surrogate	%Rec	Limits		
Hexacosane	92	60-140		

BSD Lab ID: QC30954

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Diesel C12-C22	2475	1754	71	60-140	3	35
Surrogate	%Rec	Limits				
Hexacosane	92	60-140				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126881-005	MW-3	30026	09/18/96	09/25/96	09/25/96	

Matrix: Water

Analyte	Units	126881-005
Diln Fac:		1
Benzene	ug/L	<0.5
Toluene	ug/L	<0.5
Ethylbenzene	ug/L	<0.5
m,p-Xylenes	ug/L	<0.5
o-Xylene	ug/L	<0.5
Surrogate		
Trifluorotoluene	%REC	104
Bromobenzene	%REC	101

Curtis & Tompkins, Ltd.

Lab #: 126881 BATCH QC REPORT

BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 30026
Units: ug/L
Diln Fac: 1

Prep Date: 09/25/96
Analysis Date: 09/25/96

MB Lab ID: QC31239

Analyte	Result
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylenes	<0.5
o-Xylene	<0.5

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	102	58-130
Bromobenzene	99	62-131

Curtis & Tompkins, Ltd.

Lab #: 126881 BATCH QC REPORT

BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 30026
Units: ug/L
Diln Fac: 1

Prep Date: 09/25/96
Analysis Date: 09/25/96

LCS Lab ID: QC31238

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	18.7	20	94	80-120
Toluene	17.9	20	90	80-120
Ethylbenzene	18.5	20	93	80-120
m,p-Xylenes	48	40	120	80-120
o-Xylene	18.8	20	94	80-120

Surrogate	%Rec	Limits
Trifluorotoluene	103	58-130
Bromobenzene	102	62-131

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

126881

CHAIN OF CUSTODY FORM

PROJECT NAME: KOT

JOB NUMBER: 133.005 LAB: Curtis & Tompkins

PROJECT CONTACT: Meg Mendoza / Jerome DeVerrier TURNAROUND: Normal

SAMPLED BY: Dennis Alexander REQUESTED BY: Meg Mendoza

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX: WATER	SOIL	WASTE	AIR	CONTAINERS: VOA	LITER	PINT	TUBE	METHOD PRESERVED: HCL	H_2SO_4	HNO_3	ICE	NONE	SAMPLING DATE: MONTH	DAY	YEAR	TIME	NOTES	ANALYSIS REQUESTED: TVH as gas	BTXE	TBH as diesel / motor oil	SVOCs	VOCs (8240)
-1	SCI-MW-2	X					2						X		09	18	96	1155					X	
-2	SCI-MW-3	X					2						X					0930					X	
-3	SCI-MW-6	X					2						X					1315	*				X	
-4	SCI-MW-11	X					2						X					1015					X	
-5	MW-3	X				3	1			X			X					1130		X	X	X	X	
-6	MW-4	X					2						X					1245	*				X	
-7	MW-5	X					2						X					1300					X	
-8	MW-6	X					2						X		09	18	96	1230	*				X	
-9	Trip Blank #10	X				1							X											X

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
Dennis Alexander	9/18/96 2:00 p.m.	[signature]	9/18/96 14:20

COMMENTS & NOTES: * these samples have small to substantial amount of free product!!!

Subsurface Consultants, Inc.

171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607

(510) 268-0461 • FAX: 510-268-0137

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Lafayette, CA 94549

Date: 18-SEP-96
Lab Job Number: 126734
Project ID: 133.005
Location: KOT

Reviewed by: _____

Reviewed by: _____

Curtis & Tompkins, Ltd.

Client: Subsurface Consultants

Laboratory Login Number: 126734

Project Name: KOT
Project Number: 133.005

Report Date: 19 September 96

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD: SMWW 17:5520BF**

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
126734-001	SCI-MW-2	Water	04-SEP-96	04-SEP-96	16-SEP-96	8.0	mg/L	5	TR	29850

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

Q C B a t c h R e p o r t

Client: Subsurface Consultants
Project Name: KOT
Project Number: 133.005

Laboratory Login Number: 126734
Report Date: 19 September 96

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 29850

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	5	mg/L	SMWW 17:5520BF	16-SEP-96

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	87%	SMWW 17:5520BF	16-SEP-96
BSD	84%	SMWW 17:5520BF	16-SEP-96

		Control Limits
Average Spike Recovery	85%	80% - 120%
Relative Percent Difference	4.4%	< 20%

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126734-001	SCI-MW-2	29639	09/04/96	09/07/96	09/07/96	

Matrix: Water

Analyte	Units	126734-001
Diln Fac:		1
Gasoline	ug/L	<50
Surrogate		
Trifluorotoluene	%REC	99
Bromobenzene	%REC	91

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126734-002	MW-4	29639	09/04/96	09/08/96	09/08/96	
126734-003	MW-5	29639	09/04/96	09/07/96	09/07/96	

Matrix: Water

Analyte	Units	126734-002	126734-003
Diln Fac:		1	1
Gasoline	ug/L	1000 H	<50
Surrogate			
Trifluorotoluene	%REC	98	96
Bromobenzene	%REC	96	85

H: Heavier hydrocarbons than indicated standard

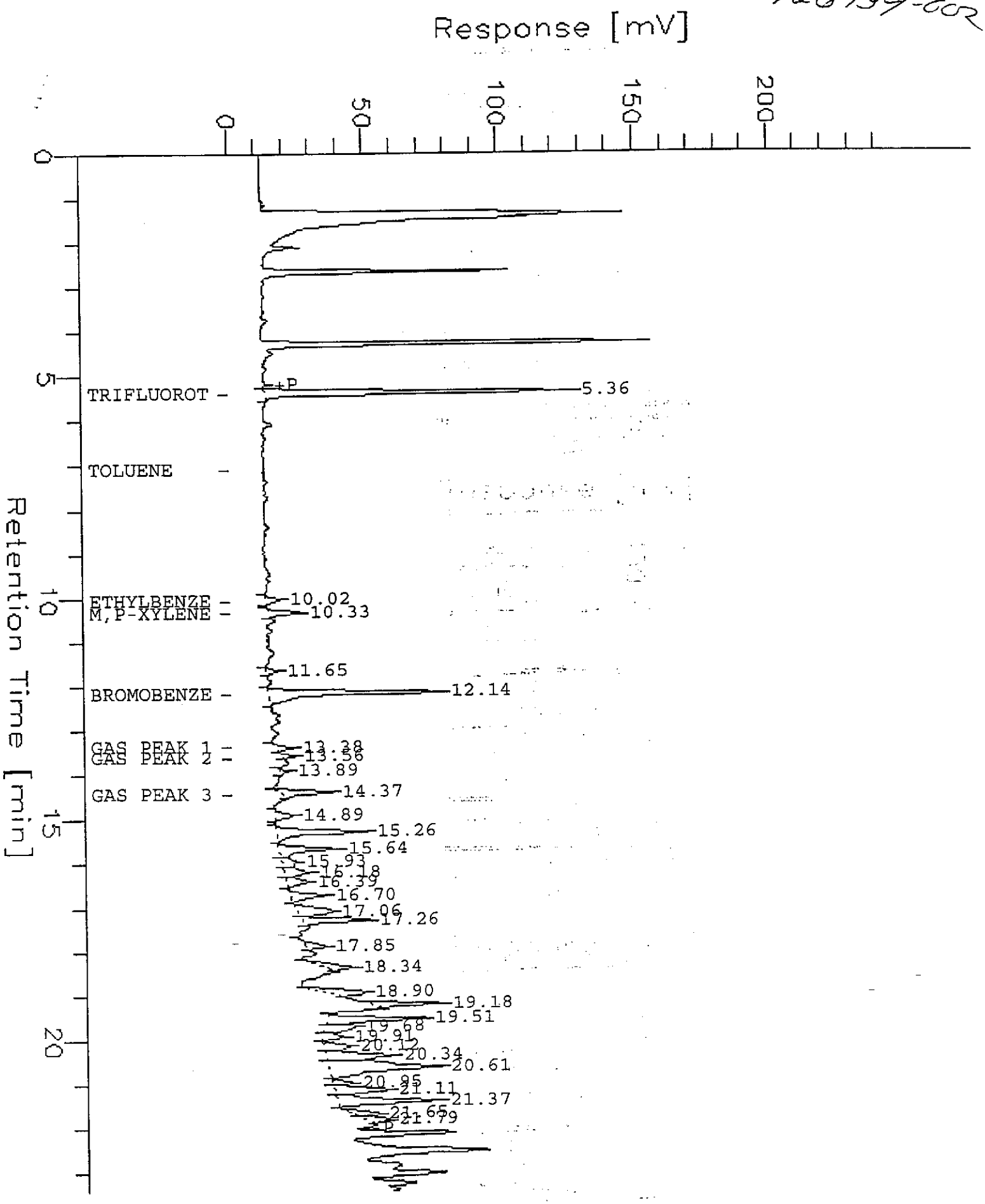
TVH2 - GC-05 RTX-1

FileName : G:\GC05\250H045.raw
Start Time : 0.00 min End Time : 23.42 min
Scale Factor: -1 Plot Offset: 0 mV

Date : 9/8/96 8:56 PM
Low Point : -0.19 mV
Plot Scale: 250 mV

High Point : 249.81 mV

126734-002



Curtis & Tompkins, Ltd.

Lab #: 126734 BATCH QC REPORT

TVH-Total Volatile Hydrocarbons	
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

METHOD BLANK

Matrix: Water	Prep Date: 09/06/96
Batch#: 29639	Analysis Date: 09/06/96
Units: ug/L	
Diln Fac: 1	

MB Lab ID: QC29799

Analyte	Result	
Gasoline	<50	
Surrogate	**%Rec**	**Recovery Limits**
Trifluorotoluene	100	69-120
Bromobenzene	79	70-122

Curtis & Tompkins, Ltd.

Lab #: 126734 BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 29639
Units: ug/L
Diln Fac: 1

Prep Date: 09/06/96
Analysis Date: 09/06/96

LCS Lab ID: QC29800

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	2007	2000	100	80-120
Surrogate	**%Rec**	**Limits**		
Trifluorotoluene	96	69-120		
Bromobenzene	103	70-122		

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

Curtis & Tompkins, Ltd.

Lab #: 126734 BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 126718-001
Matrix: Water
Batch#: 29639
Units: ug/L
Diln Fac: 1

Sample Date: 08/28/96
Received Date: 08/31/96
Prep Date: 09/06/96
Analysis Date: 09/06/96

MS Lab ID: QC29802

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	2000	62.6	1921	96	75-125
Surrogate	**%Rec**	**Limits**			
Trifluorotoluene	96	69-120			
Bromobenzene	104	70-122			

MSD Lab ID: QC29803

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	2000	1973	99	75-125	3	20
Surrogate	**%Rec**	**Limits**				
Trifluorotoluene	96	69-120				
Bromobenzene	105	70-122				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126734-001	SCI-MW-2	29815	09/04/96	09/13/96	09/16/96	
126734-002	MW-4	29815	09/04/96	09/13/96	09/17/96	
126734-003	MW-5	29815	09/04/96	09/13/96	09/16/96	

Matrix: Water

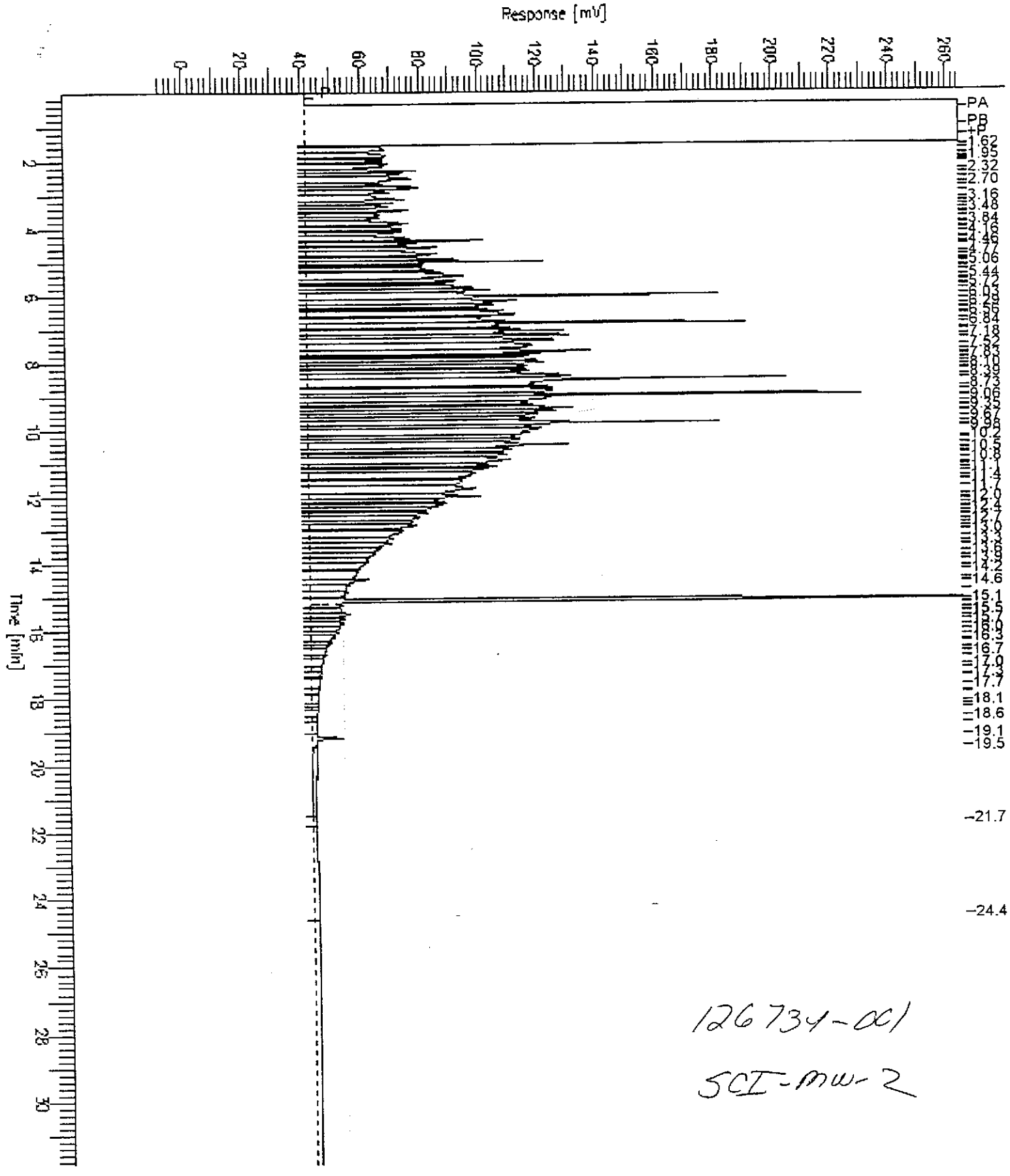
Analyte	Units	126734-001	126734-002	126734-003
Diln Fac:		1	20	1
Diesel C12-C22	ug/L	5100	240000	7700 YH
Motor Oil C22-C50	ug/L	770 YL	26000 YL	1900 YL
Surrogate				
Hexacosane	%REC	89	DO	100

DO: Surrogate diluted out
Y: Sample exhibits fuel pattern which does not resemble standard
H: Heavier hydrocarbons than indicated standard
L: Lighter hydrocarbons than indicated standard

GC15 Channel A TEH

Sample Name : W,126734-001
FileName : G:\GC15\CHB\260B018.RAW
Method : 241TEH.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: -10 mV

Sample #: 29815 Page 1 of 1
Date : 9/17/96 09:39 AM
Time of Injection: 9/16/96 08:46 PM
Low Point : -9.88 mV High Point : 264.55 mV
Plot Scale: 274.4 mV



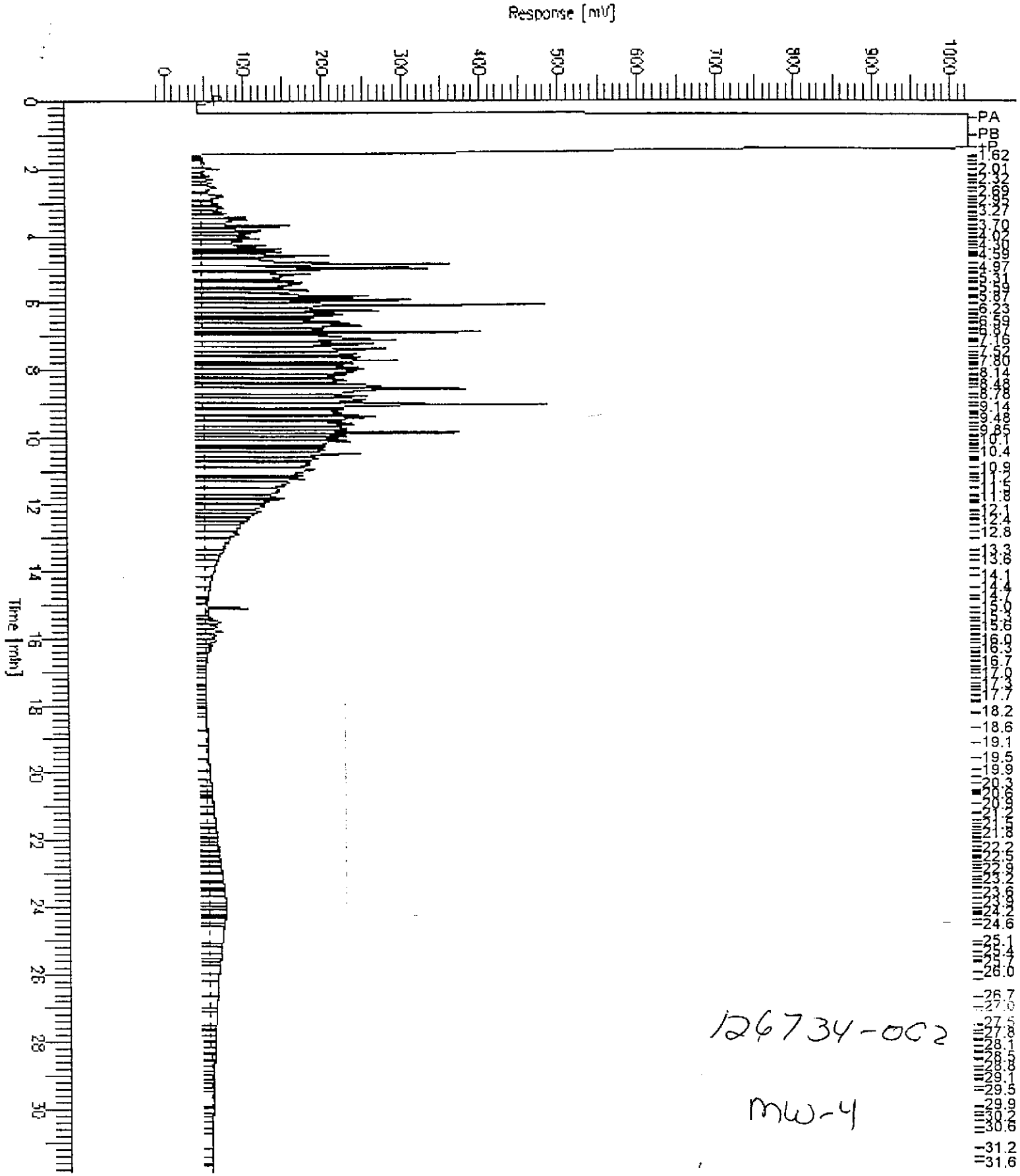
126734-001

SCI-MW-2

GC15 Channel A TEH

Sample Name : W,126734-002
FileName : G:\GC15\CHB\260B044.RAW
Method : 241TEH.MTH
Start Time : 0.00 min End Time : 31.90 min
Scale Factor: 0.0 Plot Offset: -11 mV

Sample #: 29815 Page 1 of 1
Date : 9/17/96 01:20 PM
Time of Injection: 9/17/96 12:43 PM
Low Point : -10.76 mV High Point : 1024.00 mV
Plot Scale: 1034.8 mV



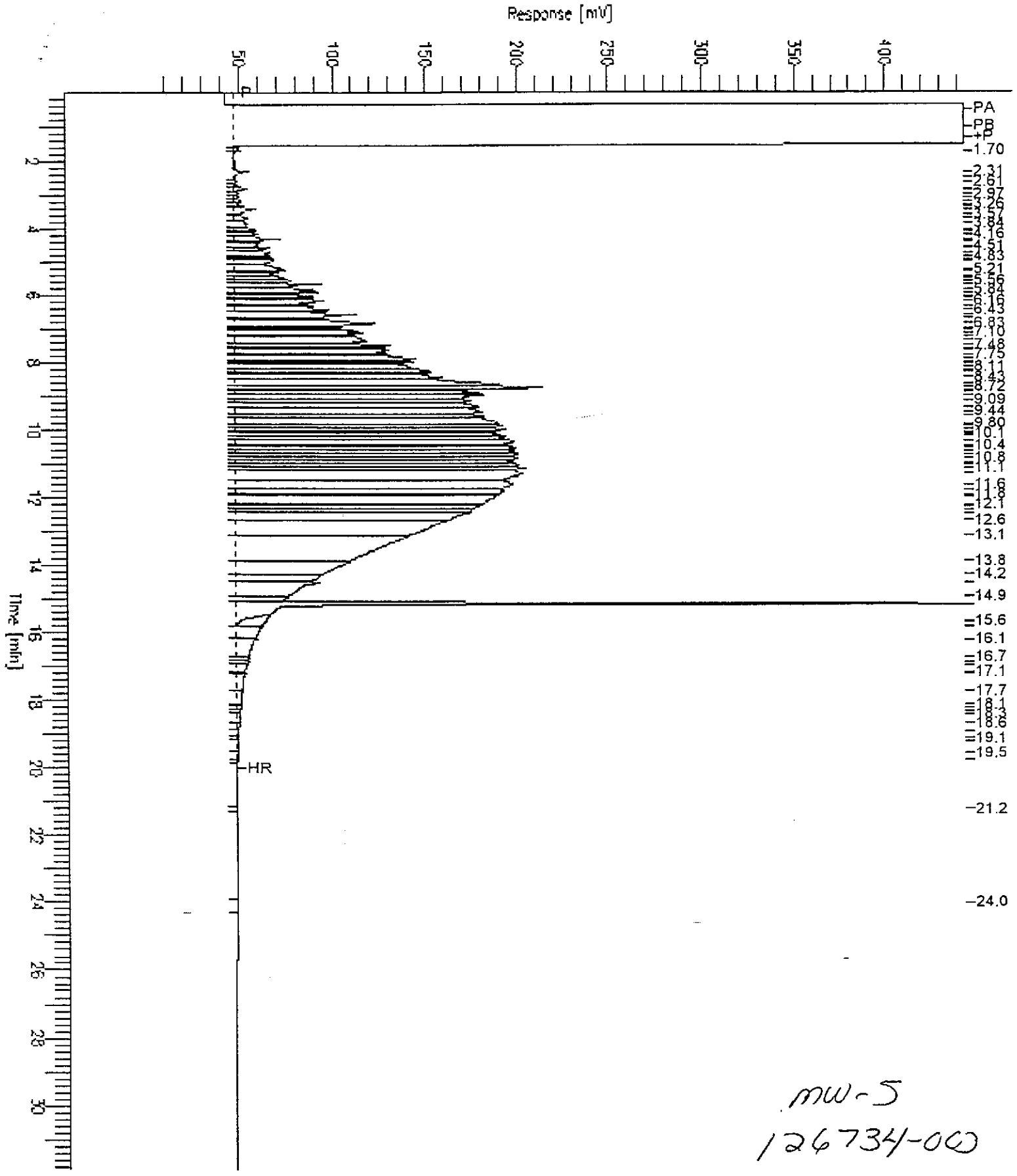
126734-002

MW-4

GC15 Channel A TEH

Sample Name : W,126734-003
FileName : G:\GC15\CHB\260B020.RAW
Method : 241TEH.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 5 mV

Sample #: 29815 Page 1 of 1
Date : 9/17/96 09:48 AM
Time of Injection: 9/16/96 10:12 PM
Low Point : 5.06 mV High Point : 443.76 mV
Plot Scale: 438.7 mV

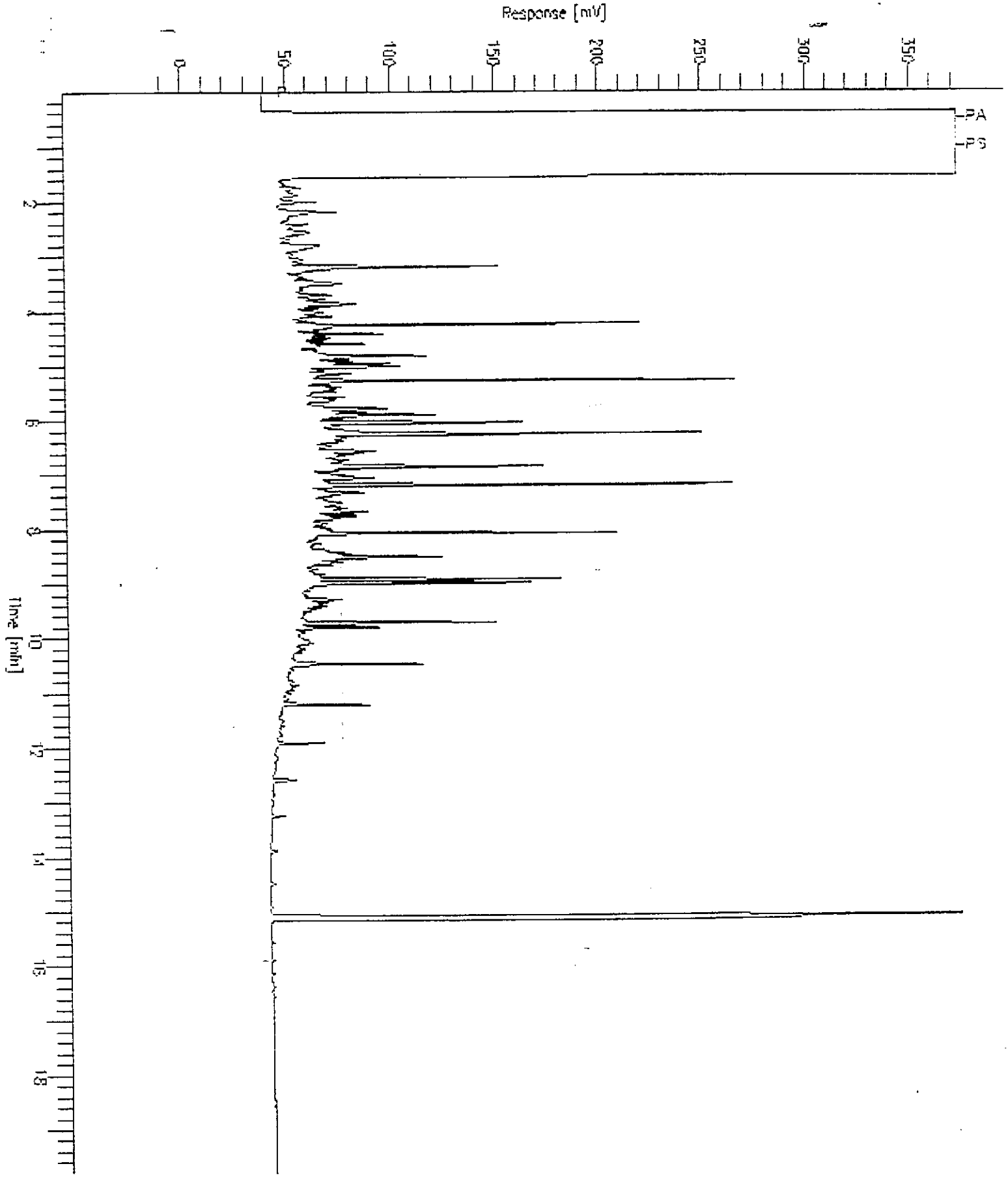


MW-5
126734-00

GC15 Channel A TEH

Sample Name : CCV,96WSJ003,DSL
FileName : G:\GC15\CHB\260B010.RAW
Method : 241TEH.MTH
Start Time : 0.01 min End Time : 19.80 min
Scale Factor: 0.0 Plot Offset: -13 mV

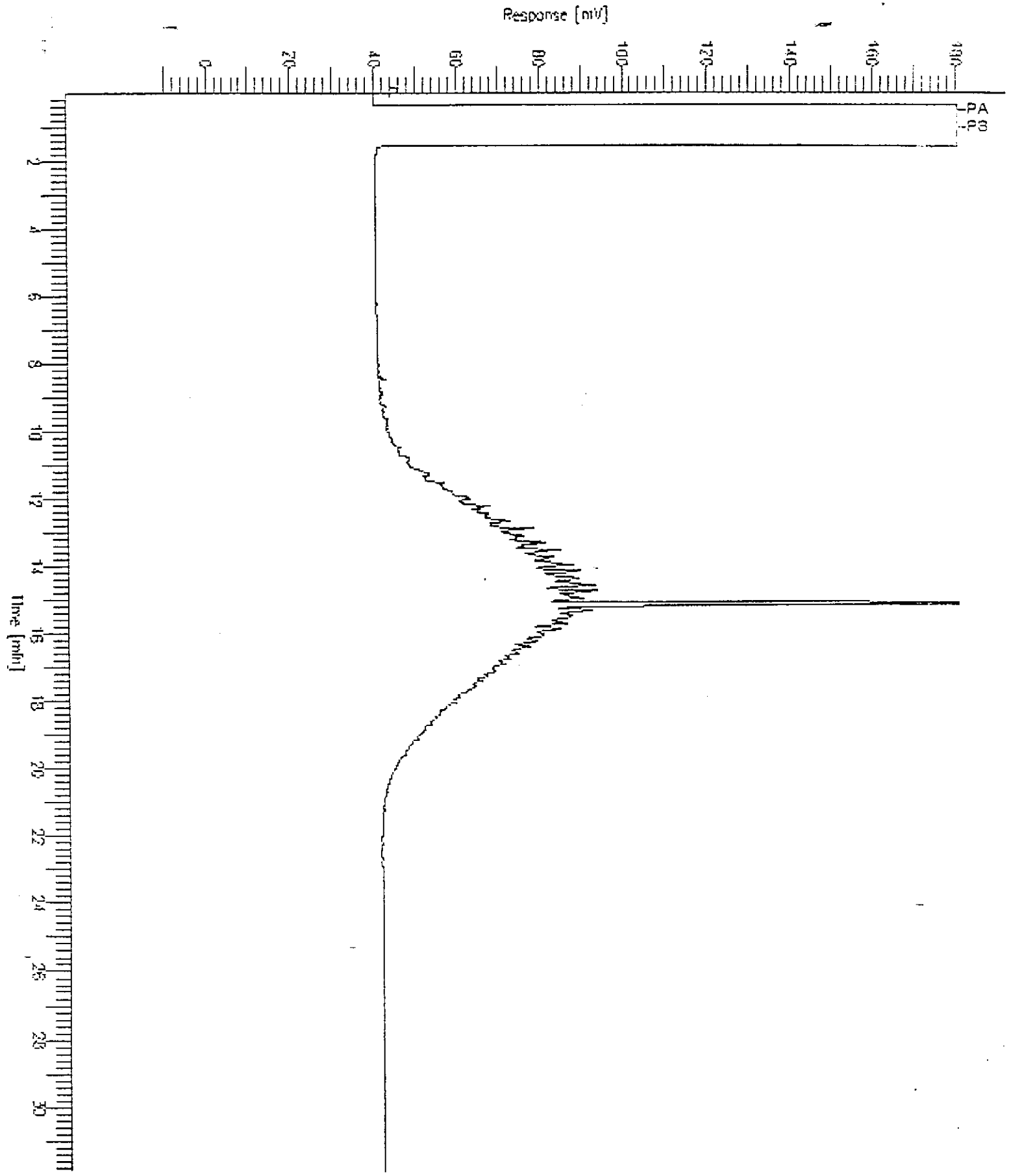
Sample #: 500MG/L
Date : 9/17/96 11:42 AM
Time of Injection: 9/16/96 01:16 PM
Low Point : -12.58 mV High Point : 372.73 mV
Plot Scale: 385.3 mV



GC15 Channel A TEH

Sample Name : ccv,96ws3011,mo
File Name : G:\GC15\GHB\260B013.RAW
Method : 241TEH.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: -12 mV

Sample #: 500mg/l
Date : 9/17/96 11:40 AM
Time of Injection: 9/16/96 05:11 PM
Low Point : -11.93 mV High Point : 180.56 mV
Plot Scale: 192.5 mV



Curtis & Tompkins, Ltd.

Lab #: 126734 BATCH QC REPORT

TEH-Tot Ext Hydrocarbons	
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 3520
Location: KOT	

METHOD BLANK

Matrix: Water	Prep Date: 09/13/96
Batch#: 29815	Analysis Date: 09/16/96
Units: ug/L	
Diln Fac: 1	

MB Lab ID: QC30453

Analyte	Result	
Diesel C12-C22	<50	
Motor Oil C22-C50	<250	
Surrogate	**%Rec**	**Recovery Limits**
Hexacosane	80	60-140

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 29815
Units: ug/L
Diln Fac: 1

Prep Date: 09/13/96
Analysis Date: 09/16/96

BS Lab ID: QC30454

Analyte	Spike Added	BS	%Rec #	Limits
Diesel C12-C22	2475	1612	65	60-140
Surrogate	**%Rec**	**Limits**		
Hexacosane	80	60-140		

BSD Lab ID: QC30455

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Diesel C12-C22	2475	1714	69	60-140	6	35
Surrogate	**%Rec**	**Limits**				
Hexacosane	86	60-140				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126734-002	MW-4	29639	09/04/96	09/08/96	09/08/96	
126734-003	MW-5	29639	09/04/96	09/07/96	09/07/96	

Matrix: Water

Analyte	Units	126734-002	126734-003
Diln Fac:		1	1
Benzene	ug/L	100	<0.5
Toluene	ug/L	<0.5	<0.5
Ethylbenzene	ug/L	5.2	<0.5
m,p-Xylenes	ug/L	7.2	<0.5
o-Xylene	ug/L	<0.5	<0.5
Surrogate			
Trifluorotoluene	%REC	99	100
Bromobenzene	%REC	96	96

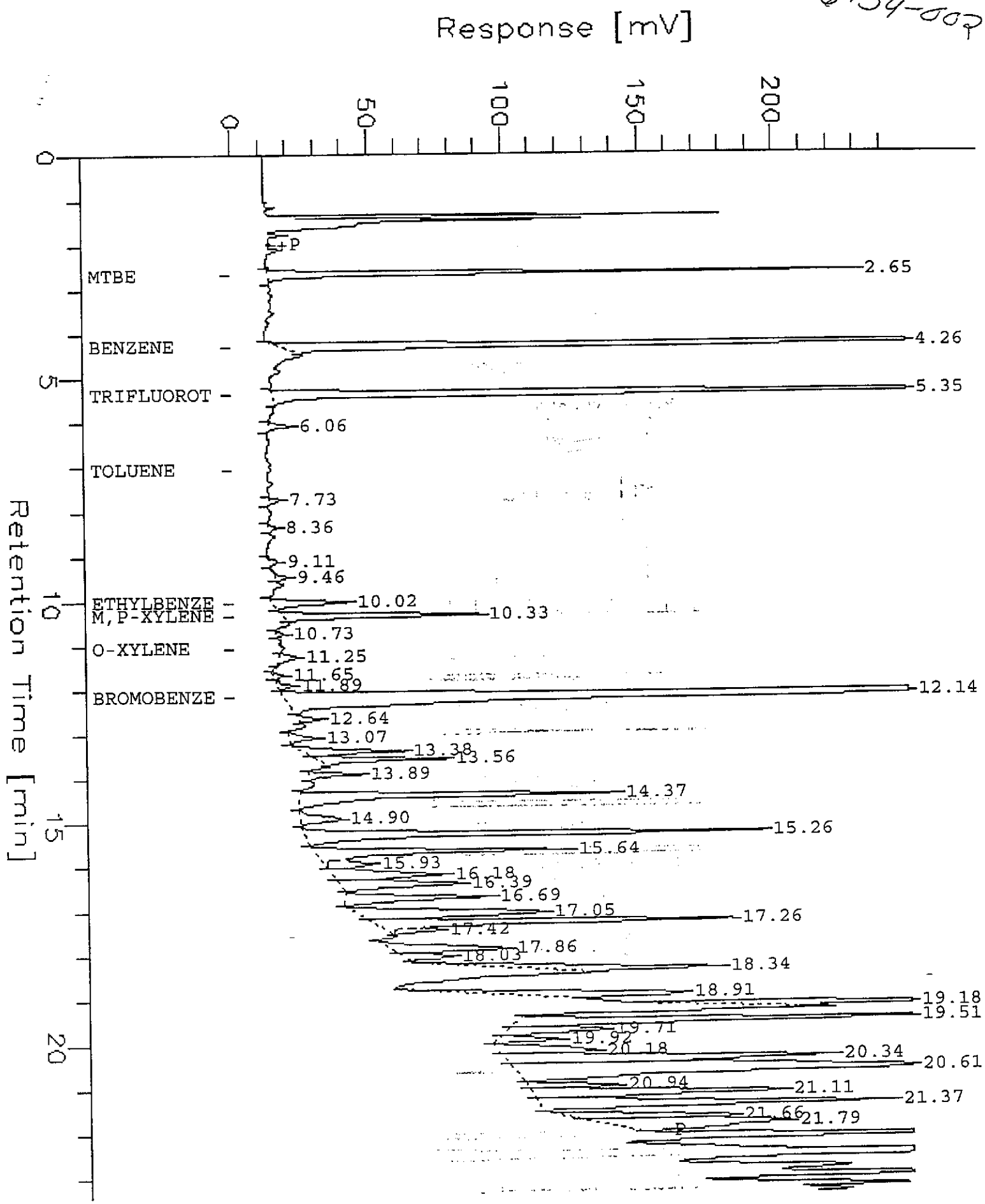
BTXE2 - GC-05 RTX-1

FileName : G:\GC05\250G045.raw
Start Time : 0.00 min End Time : 23.42 min
Scale Factor: -1 Plot Offset: -1 mV

Date : 9/8/96 8:55 PM
Low Point : -0.55 mV
Plot Scale: 250 mV

High Point : 249.45 mV

126734-002



Curtis & Tompkins, Ltd.

Lab #: 126734

BATCH QC REPORT

BTXE	
Client: Subsurface Consultants	Analysis Method: EPA 8020
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

METHOD BLANK	
Matrix: Water	Prep Date: 09/06/96
Batch#: 29639	Analysis Date: 09/06/96
Units: ug/L	
Diln Fac: 1	

MB Lab ID: QC29799

Analyte	Result
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylenes	<0.5
o-Xylene	<0.5

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	103	58-130
Bromobenzene	90	62-131

Curtis & Tompkins, Ltd.

Lab #: 126734 BATCH QC REPORT

BTXE	
Client: Subsurface Consultants	Analysis Method: EPA 8020
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
LABORATORY CONTROL SAMPLE	
Matrix: Water	Prep Date: 09/06/96
Batch#: 29639	Analysis Date: 09/06/96
Units: ug/L	
Diln Fac: 1	

LCS Lab ID: QC29801

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	19.9	20	100	80-120
Toluene	18.3	20	92	80-120
Ethylbenzene	17.3	20	87	80-120
m,p-Xylenes	44.5	40	111	80-120
o-Xylene	18.8	20	94	80-120
Surrogate	**%Rec**	**Limits**		
Trifluorotoluene	103	58-130		
Bromobenzene	91	62-131		

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

Field ID: SCI-MW-2
Lab ID: 126734-001
Matrix: Water
Batch#: 29710
Units: ug/L
Diln Fac: 1

Sampled: 09/04/96
Received: 09/04/96
Extracted: 09/10/96
Analyzed: 09/10/96

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	90	68-126
Toluene-d8	120	87-125
Bromofluorobenzene	106	79-122

Data File: /chem/bna01.i/091196a.b/08_mb29694.d
Report Date: 12-Sep-1996 10:20

Curtis & Tompkins, Ltd.

Curtis & Tompkins Labs

Unknown Compounds Quantitation Report

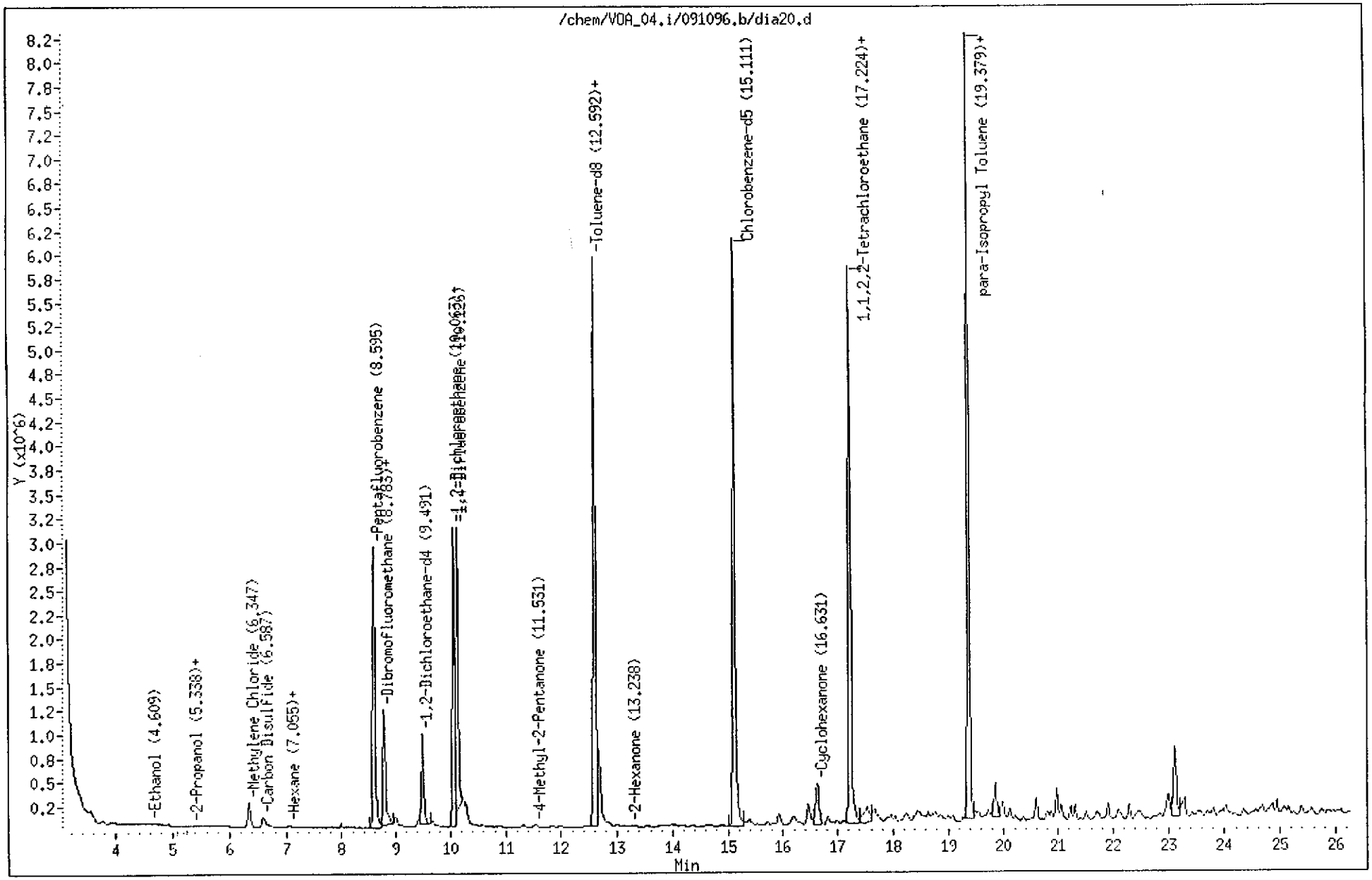
Data file : /chem/bna01.i/091196a.b/08_mb29694.d
Lab Smp Id: mb,qc29980 Client Smp ID: CURTIS&TOMPKINS,LTD
Inj Date : 11-SEP-1996 17:59 Autotune Date: 10-Sep-96 15:12:2
Operator : dsh Inst ID: bna01.i
Smp Info :
Misc Info :
Comment :
Method : /chem/bna01.i/091196a.b/+bna1_6pt.m
Meth Date : 11-Sep-1996 13:59
Cal Date : 11-SEP-96 13:10 Cal File: 02_ccv0911a.d
Als bottle: 8
Dil Factor: 1.000 Target Version: 3.10
Integrator: HP RTE Compound Sublist: all.sub
Sample Matrix: WATER
Quantitative Mode : Use RF of Nearest Std

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA_04.i/091096.b/dia20.d
Date : 10-SEP-96 20:32
Client ID: DYNA P&T
Sample Info: S,126734-001
Purge Volume: 5.0
Column phase: RTx Volatiles

Instrument: VOA_04.i
Operator: LLH
Column diameter: 0.32

No TIC



Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

Field ID: TRIP BLANK #7
Lab ID: 126734-004
Matrix: Water
Batch#: 29710
Units: ug/L
Diln Fac: 1

Sampled: 09/04/96
Received: 09/04/96
Extracted: 09/10/96
Analyzed: 09/10/96

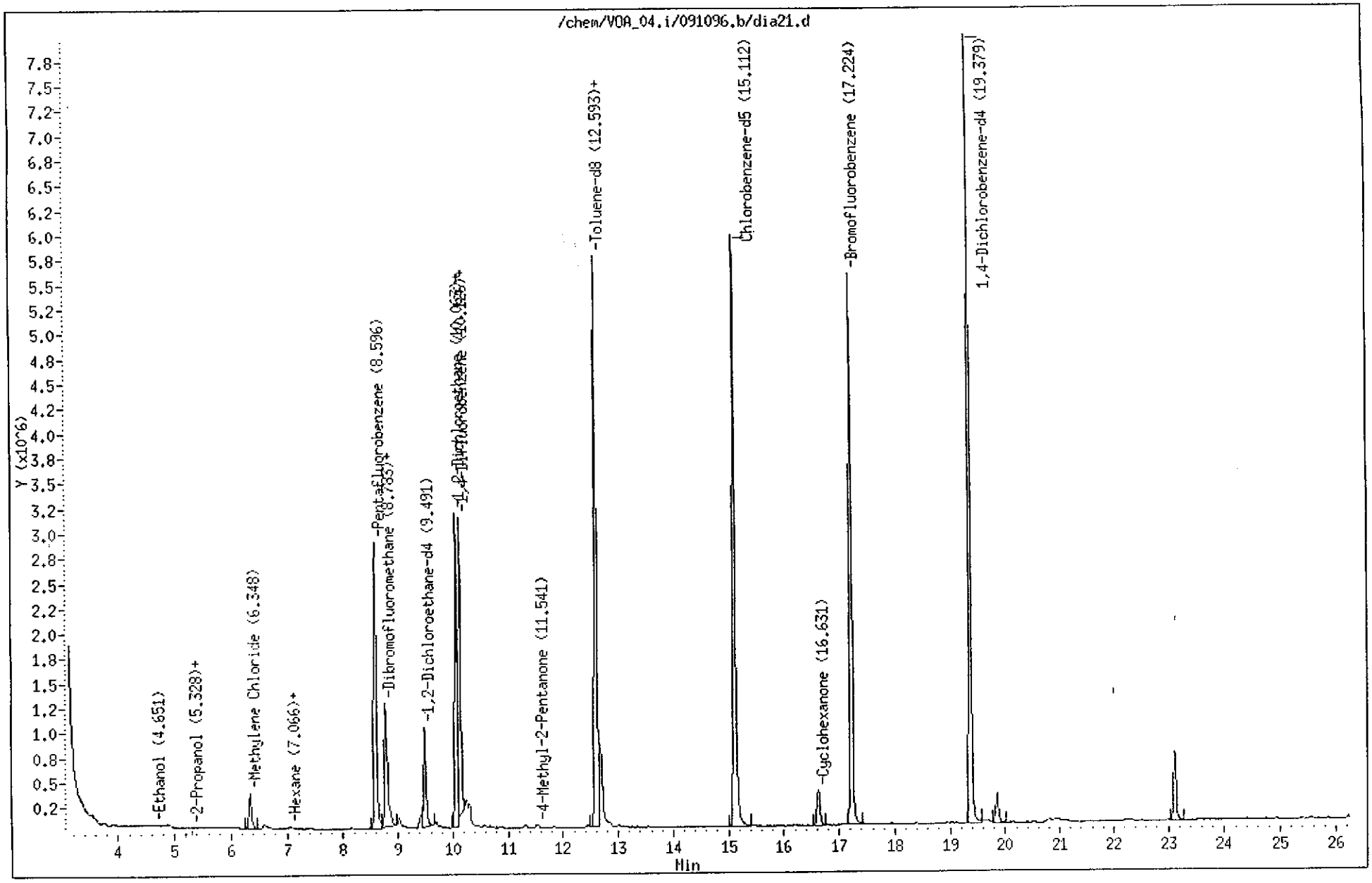
Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	95	68-126
Toluene-d8	116	87-125
Bromofluorobenzene	103	79-122

Data File: /chem/VOA_04.i/091096.b/dia21.d
Date : 10-SEP-96 21:03
Client ID: DYNA P&T
Sample Info: S,126734-004
Purge Volume: 5.0
Column phase: RTx Volatiles

Instrument: VOA_04.i

Operator: LLH
Column diameter: 0.32



Curtis & Tompkins, Ltd.

Lab #: 126734 BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 29710
Units: ug/L
Diln Fac: 1

Prep Date: 09/10/96
Analysis Date: 09/10/96

MB Lab ID: QC30056

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	96	68-126
Toluene-d8	102	87-125
Bromofluorobenzene	104	79-122

Curtis & Tompkins, Ltd.

Lab #: 126734 BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 29710
Units: ug/L
Diln Fac: 1

Prep Date: 09/10/96
Analysis Date: 09/10/96

LCS Lab ID: QC30054

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	49.66	50	99	51-180
Trichloroethene	48	50	96	73-141
Benzene	48.95	50	98	78-142
Toluene	48.98	50	98	76-150
Chlorobenzene	49.74	50	100	83-129

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	96	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	99	79-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

Curtis & Tompkins, Ltd.

Lab #: 126734

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8240
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 126765-010
Matrix: Water
Batch#: 29710
Units: ug/L
Diln Fac: 1

Sample Date: 09/05/96
Received Date: 09/06/96
Prep Date: 09/11/96
Analysis Date: 09/11/96

MS Lab ID: QC30079

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5	48.78	98	51-180
Trichloroethene	50	<5	45.93	92	73-141
Benzene	50	<5	49.78	100	78-142
Toluene	50	<5	46.24	93	76-150
Chlorobenzene	50	<5	48.7	97	83-129

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	109	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	101	79-122

MSD Lab ID: QC30080

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	51.53	103	51-180	5	14
Trichloroethene	50	47.02	94	73-141	2	14
Benzene	50	50.86	102	78-142	2	11
Toluene	50	48.77	98	76-150	5	13
Chlorobenzene	50	50.09	100	83-129	3	13

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	109	68-126
Toluene-d8	103	87-125
Bromofluorobenzene	101	79-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

Field ID: SCI-MW-2
Lab ID: 126734-001
Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Sampled: 09/04/96
Received: 09/04/96
Extracted: 09/09/96
Analyzed: 09/11/96

Analyte	Result	Reporting Limit
Phenol	ND	9.4
2-Chlorophenol	ND	9.4
Benzyl alcohol	ND	9.4
2-Methylphenol	ND	9.4
4-Methylphenol	ND	9.4
2-Nitrophenol	ND	47
2,4-Dimethylphenol	ND	9.4
Benzoic acid	ND	47
2,4-Dichlorophenol	ND	9.4
4-Chloro-3-methylphenol	ND	9.4
2,4,6-Trichlorophenol	ND	9.4
2,4,5-Trichlorophenol	ND	47
2,4-Dinitrophenol	ND	47
4-Nitrophenol	ND	47
4,6-Dinitro-2-methylphenol	ND	47
Pentachlorophenol	ND	47
N-Nitrosodimethylamine	ND	9.4
Aniline	ND	9.4
bis(2-Chloroethyl)ether	ND	9.4
1,3-Dichlorobenzene	ND	9.4
1,4-Dichlorobenzene	ND	9.4
1,2-Dichlorobenzene	ND	9.4
bis(2-Chloroisopropyl) ether	ND	9.4
N-Nitroso-di-n-propylamine	ND	9.4
Hexachloroethane	ND	9.4
Nitrobenzene	ND	9.4
Isophorone	ND	9.4
bis(2-Chloroethoxy)methane	ND	9.4
1,2,4-Trichlorobenzene	ND	9.4
Naphthalene	ND	9.4
4-Chloroaniline	ND	9.4
Hexachlorobutadiene	ND	9.4
2-Methylnaphthalene	6.0 J	9.4
Hexachlorocyclopentadiene	ND	9.4
2-Chloronaphthalene	ND	9.4
2-Nitroaniline	ND	47
Dimethylphthalate	ND	9.4
Acenaphthylene	ND	9.4

Semivolatile Organics by GC/MS

Field ID: SCI-MW-2
Lab ID: 126734-001
Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Sampled: 09/04/96
Received: 09/04/96
Extracted: 09/09/96
Analyzed: 09/11/96

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	9.4
3-Nitroaniline	ND	47
Acenaphthene	ND	9.4
Dibenzofuran	ND	9.4
2,4-Dinitrotoluene	ND	9.4
Diethylphthalate	ND	9.4
4-Chlorophenyl-phenylether	ND	9.4
Fluorene	ND	9.4
4-Nitroaniline	ND	47
N-Nitrosodiphenylamine	ND	9.4
Azobenzene	ND	9.4
4-Bromophenyl-phenylether	ND	9.4
Hexachlorobenzene	ND	9.4
Phenanthrene	ND	9.4
Anthracene	ND	9.4
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4
Pyrene	ND	9.4
Butylbenzylphthalate	ND	9.4
3,3'-Dichlorobenzidine	ND	47
Benzo(a)anthracene	ND	9.4
Chrysene	ND	9.4
bis(2-Ethylhexyl)phthalate	ND	9.4
Di-n-octylphthalate	ND	9.4
Benzo(b)fluoranthene	ND	9.4
Benzo(k)fluoranthene	ND	9.4
Benzo(a)pyrene	ND	9.4
Indeno(1,2,3-cd)pyrene	ND	9.4
Dibenz(a,h)anthracene	ND	9.4
Benzo(g,h,i)perylene	ND	9.4

Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	56	21-110
Phenol-d5	62	10-110
2,4,6-Tribromophenol	60	10-123
Nitrobenzene-d5	61	35-114
2-Fluorobiphenyl	60	43-116
Terphenyl-d14	40	33-141

J: Estimated Value

Data File: /chem/bna01.i/091196a.b/15_6734-001.d
Report Date: 12-Sep-1996 10:21

Curtis & Tompkins, Ltd.

Curtis & Tompkins Labs

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: CURTIS & TOMPKINS
Lab Smp Id: s,126734-001
Operator : dsh
Sample Location:
Sample Matrix: WATER
Analysis Type: SV

Client SDG: 8270
Client Smp ID: CURTIS&TOMPKINS,LTD
Sample Date:
Sample Point:
Date Received:
Level: LOW

Number TICs found: 20

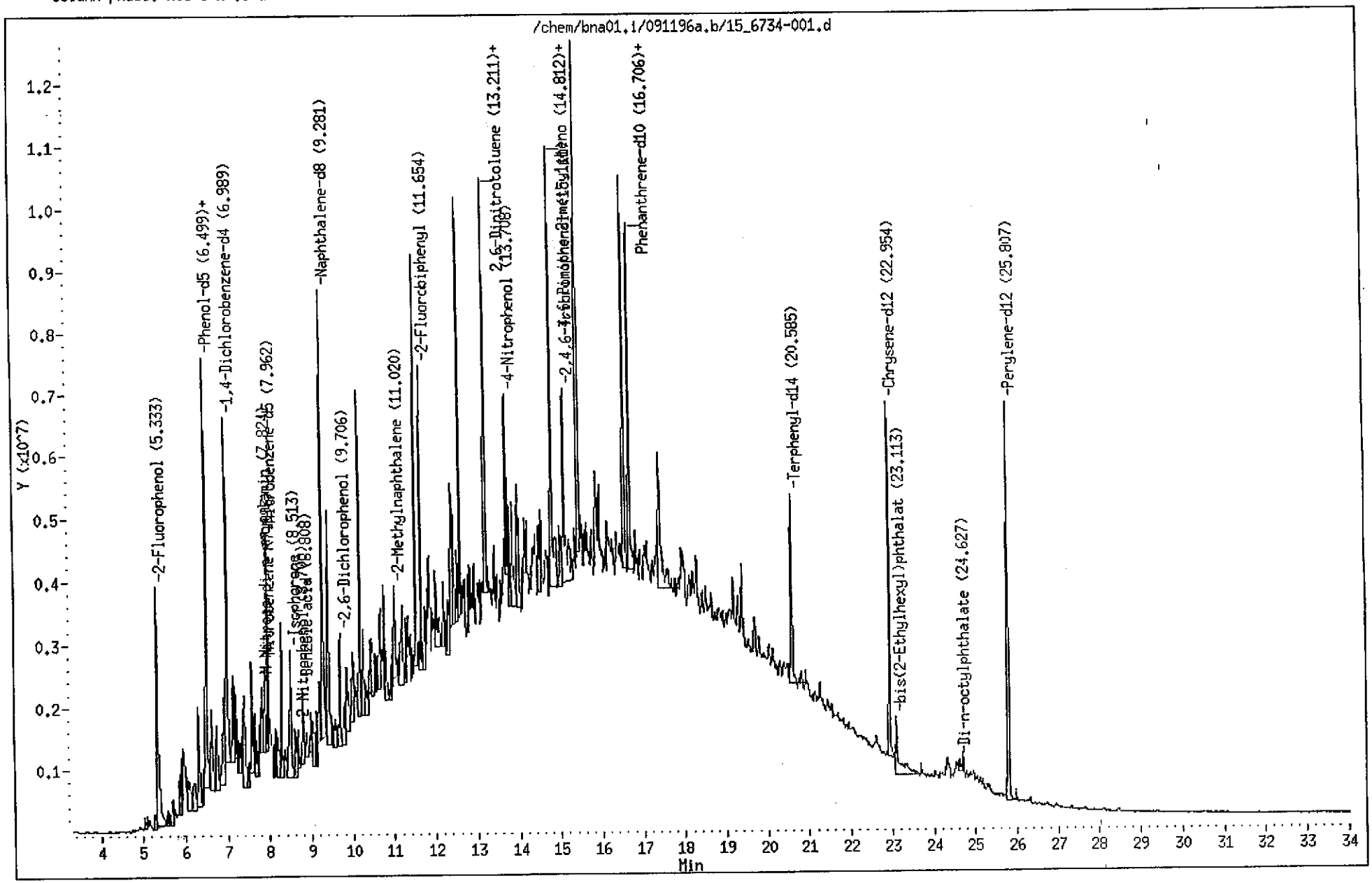
CONCENTRATION UNITS:
(ug/L or ug/KG) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	6.302	14.73	NJ
2.		Unknown	6.626	13.04	NJ
3.		Unknown	6.920	16.64	NJ
4.		Unknown	7.392	14.73	NJ
5.		Unknown	7.579	13.01	NJ
6.		Unknown	8.297	14.86	NJ
7.	17301-23-4	Undecane, 2,6-dimethyl-	9.410	23.94	NJ
8.		Unknown alkane	10.180	23.42	NJ
9.		Unknown	11.208	12.29	NJ
10.		Unknown alkane	11.535	33.95	NJ
11.		Unknown	12.011	10.83	NJ
12.	571-61-9	Naphthalene, 1,5-dimethyl-	12.398	18.02	NJ
13.		Unknown alkane	12.596	34.76	NJ
14.	2245-38-7	Naphthalene, 1,6,7-trimethy	13.768	13.50	NJ
15.		Unknown	13.847	12.35	NJ
16.		Unknown	13.966	17.66	NJ
17.		Unknown	15.001	11.00	NJ
18.		Unknown	15.450	49.52	NJ
19.	112-95-8	Eicosane	16.566	39.37	NJ
20.		Unknown alkane	17.405	26.96	NJ

Data File: /chem/bna01.i/091196a.b/15_6734-001.d
Date : 11-SEP-1996 23:06
Client ID: CURTIS&TOMPKINS,LTD
Sample Info:
Volume Injected (uL): 1.0
Column phase: Xti 5 x .5 u

Instrument: bna01.i

Operator: dsh
Column diameter: 0.25



EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Prep Date: 09/09/96
Analysis Date: 09/11/96

MB Lab ID: QC29980

Analyte	Result	Reporting Limit
Phenol	ND	10
2-Chlorophenol	ND	10
Benzyl alcohol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	50
2,4-Dimethylphenol	ND	10
Benzoic acid	ND	50
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	50
2,4-Dinitrophenol	ND	50
4-Nitrophenol	ND	50
4,6-Dinitro-2-methylphenol	ND	50
Pentachlorophenol	ND	10
N-Nitrosodimethylamine	ND	10
Aniline	ND	10
bis(2-Chloroethyl)ether	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
1,2-Dichlorobenzene	ND	10
bis(2-Chloroisopropyl) ether	ND	10
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	50
2-Nitroaniline	ND	10
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	50
3-Nitroaniline	ND	

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Prep Date: 09/09/96
Analysis Date: 09/11/96

MB Lab ID: QC29980

Analyte	Result	Reporting Limit
Acenaphthene	ND	10
Dibenzofuran	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	50
N-Nitrosodiphenylamine	ND	10
Azobenzene	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	50
Benzo(a)anthracene	ND	10
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10

Surrogate	%Rec	Recovery Limits
2-Fluorophenol	59	21-110
Phenol-d5	64	10-110
2,4,6-Tribromophenol	49	10-123
Nitrobenzene-d5	61	35-114
2-Fluorobiphenyl	62	43-116
Terphenyl-d14	64	33-141

Curtis & Tompkins, Ltd.

Lab #: 126734 BATCH QC REPORT

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 29694
Units: ug/L
Diln Fac: 1

Prep Date: 09/09/96
Analysis Date: 09/11/96

BS Lab ID: QC29981

Analyte	Spike Added	BS	%Rec #	Limits
Phenol	100	64.31	64	12-110
2-Chlorophenol	100	71.21	71	27-123
4-Chloro-3-methylphenol	100	63.38	63	23-97
4-Nitrophenol	100	50.17	50	10-80
Pentachlorophenol	100	52.23	52	9-103
1,4-Dichlorobenzene	50	29.99	60	36-97
N-Nitroso-di-n-propylamine	50	26.68	53	41-116
1,2,4-Trichlorobenzene	50	29.47	59	39-98
Acenaphthene	50	35.01	70	46-118
2,4-Dinitrotoluene	50	33.25	67	24-96
Pyrene	50	34.66	69	26-127

Surrogate	%Rec	Limits
2-Fluorophenol	66	21-110
Phenol-d5	69	10-110
2,4,6-Tribromophenol	55	10-123
Nitrobenzene-d5	67	35-114
2-Fluorobiphenyl	66	43-116
Terphenyl-d14	69	33-141

BSD Lab ID: QC29982

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Phenol	100	61.22	61	12-110	5	42
2-Chlorophenol	100	68.04	68	27-123	5	40
4-Chloro-3-methylphenol	100	62.62	62	23-97	1	42
4-Nitrophenol	100	50.61	51	10-80	1	50
Pentachlorophenol	100	58.26	58	9-103	11	50
1,4-Dichlorobenzene	50	28.88	58	36-97	4	28
N-Nitroso-di-n-propylamine	50	25.86	52	41-116	3	38
1,2,4-Trichlorobenzene	50	28.62	57	39-98	3	28
Acenaphthene	50	34.94	70	46-118	0	31
2,4-Dinitrotoluene	50	33.64	67	24-96	3	38
Pyrene	50	34.51	69	26-127	0	31

Surrogate	%Rec	Limits
2-Fluorophenol	61	21-110
Phenol-d5	65	10-110
2,4,6-Tribromophenol	55	10-123
Nitrobenzene-d5	65	35-114
2-Fluorobiphenyl	65	43-116
Terphenyl-d14	70	33-141

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 11 outside limits
Spike Recovery: 0 out of 22 outside limits
DO: Surrogate diluted out

PCBs

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: PCB
Prep Method: EPA 3520

Field ID: SCI-MW-2
Lab ID: 126734-001
Matrix: Water
Batch#: 29615
Units: ug/L
Diln Fac: 1

Sampled: 09/04/96
Received: 09/04/96
Extracted: 09/05/96
Analyzed: 09/10/96

Analyte	Result	Reporting Limit
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0

Surrogate	%Recovery	Recovery Limits
TCMX	44*	60-150
Decachlorobiphenyl	33	30-130

* Values outside of QC limits

Polychlorinated Biphenyls

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: PCB
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 29615
Units: ug/L
Diln Fac: 1

Prep Date: 09/05/96
Analysis Date: 09/10/96

MB Lab ID: QC29704

Analyte	Result	Reporting Limit
Aroclor-1016	ND	1.0
Aroclor-1221	ND	1.0
Aroclor-1232	ND	1.0
Aroclor-1242	ND	1.0
Aroclor-1248	ND	1.0
Aroclor-1254	ND	1.0
Aroclor-1260	ND	1.0

Surrogate	%Rec	Recovery Limits
TCMX	70	60-150
Decachlorobiphenyl	78	30-130

Curtis & Tompkins, Ltd.

Lab #: 126734 BATCH QC REPORT

Polychlorinated Biphenyls

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: PCB
Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 29615
Units: ug/L
Diln Fac: 1

Prep Date: 09/05/96
Analysis Date: 09/10/96

BS Lab ID: QC29705

Analyte	Spike Added	BS	%Rec	#	Limits
Aroclor-1260	5	4.35	87		50-128
Surrogate	**%Rec**	**Limits**			
TCMX	60	60-150			
Decachlorobiphenyl	74	30-130			

BSD Lab ID: QC29706

Analyte	Spike Added	BSD	%Rec	#	Limits	RPD	#	Limit
Aroclor-1260	5	4.45	89		50-128	2		20
Surrogate	**%Rec**	**Limits**						
TCMX	65	60-150						
Decachlorobiphenyl	69	30-130						

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

Curtis & Tompkins, Ltd.

SAMPLE ID: SCI-MW-2
LAB ID: 126734-001
CLIENT: Subsurface Consultants
PROJECT ID: 133.005
LOCATION: KOT
MATRIX: Filtrate

DATE SAMPLED: 09/04/96
DATE RECEIVED: 09/04/96
DATE REPORTED: 09/18/96

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	29688	EPA 6010A	09/11/96
Arsenic	15	5.0	1	29688	EPA 6010A	09/11/96
Barium	320	10	1	29688	EPA 6010A	09/11/96
Beryllium	ND	2.0	1	29688	EPA 6010A	09/11/96
Cadmium	ND	2.0	1	29688	EPA 6010A	09/11/96
Chromium (total)	ND	10	1	29688	EPA 6010A	09/11/96
Cobalt	ND	20	1	29688	EPA 6010A	09/11/96
Copper	ND	10	1	29688	EPA 6010A	09/11/96
Lead	ND	3.0	1	29688	EPA 6010A	09/11/96
Mercury	ND	0.20	1	29838	EPA 7470	09/16/96
Molybdenum	ND	20	1	29688	EPA 6010A	09/11/96
Nickel	ND	20	1	29688	EPA 6010A	09/11/96
Selenium	ND	5.0	1	29688	EPA 6010A	09/11/96
Silver	ND	5.0	1	29688	EPA 6010A	09/11/96
Thallium	ND	5.0	1	29688	EPA 6010A	09/11/96
Vanadium	ND	10	1	29688	EPA 6010A	09/11/96
Zinc	ND	20	1	29688	EPA 6010A	09/11/96

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: Subsurface Consultants
JOB NUMBER: 126734

DATE REPORTED: 09/18/96

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	ug/L	1	29688	EPA 6010A	09/11/96
Arsenic	ND	5	ug/L	1	29688	EPA 6010A	09/11/96
Barium	ND	10	ug/L	1	29688	EPA 6010A	09/11/96
Beryllium	ND	2	ug/L	1	29688	EPA 6010A	09/11/96
Cadmium	ND	2	ug/L	1	29688	EPA 6010A	09/11/96
Chromium (total)	ND	10	ug/L	1	29688	EPA 6010A	09/11/96
Cobalt	ND	20	ug/L	1	29688	EPA 6010A	09/11/96
Copper	ND	10	ug/L	1	29688	EPA 6010A	09/11/96
Lead	ND	3	ug/L	1	29688	EPA 6010A	09/11/96
Mercury	ND	0.2	ug/L	1	29838	EPA 7470	09/16/96
Molybdenum	ND	20	ug/L	1	29688	EPA 6010A	09/11/96
Nickel	ND	20	ug/L	1	29688	EPA 6010A	09/11/96
Selenium	ND	5	ug/L	1	29688	EPA 6010A	09/11/96
Silver	ND	5	ug/L	1	29688	EPA 6010A	09/11/96
Thallium	ND	5	ug/L	1	29688	EPA 6010A	09/11/96
Vanadium	ND	10	ug/L	1	29688	EPA 6010A	09/11/96
Zinc	ND	20	ug/L	1	29688	EPA 6010A	09/11/96

ND = Not Detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: Subsurface Consultants
JOB NUMBER: 126734

DATE REPORTED: 09/18/96

BATCH QC REPORT
BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS% Rec.	BSD% Rec.	Rec. Limits	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Antimony	500	507	555	ug/L	101	111	80-120	9	35	29688	EPA 6010A	09/11/96
Arsenic	2000	1940	1970	ug/L	97	99	80-120	2	35	29688	EPA 6010A	09/11/96
Barium	2000	1980	1970	ug/L	99	99	80-120	1	35	29688	EPA 6010A	09/11/96
Beryllium	50	50.4	51.5	ug/L	101	103	80-120	2	35	29688	EPA 6010A	09/11/96
Cadmium	50	52.8	53.1	ug/L	106	106	80-120	1	35	29688	EPA 6010A	09/11/96
Chromium (total)	200	198	199	ug/L	99	100	80-120	1	35	29688	EPA 6010A	09/11/96
Cobalt	500	492	507	ug/L	98	101	80-120	3	35	29688	EPA 6010A	09/11/96
Copper	250	249	248	ug/L	100	99	80-120	0	35	29688	EPA 6010A	09/11/96
Lead	500	505	520	ug/L	101	104	80-120	3	35	29688	EPA 6010A	09/11/96
Mercury	5	5.22	5.002	ug/L	104	100	80-120	4	35	29838	EPA 7470	09/16/96
Molybdenum	400	406	414	ug/L	102	104	80-120	2	35	29688	EPA 6010A	09/11/96
Nickel	500	507	516	ug/L	101	103	80-120	2	35	29688	EPA 6010A	09/11/96
Selenium	2000	2020	2040	ug/L	101	102	80-120	1	35	29688	EPA 6010A	09/11/96
Silver	100	90.4	89.7	ug/L	90	90	80-120	1	35	29688	EPA 6010A	09/11/96
Thallium	2000	2040	2070	ug/L	102	104	80-120	2	35	29688	EPA 6010A	09/11/96
Vanadium	500	495	498	ug/L	99	100	80-120	1	35	29688	EPA 6010A	09/11/96
Zinc	500	480	493	ug/L	96	99	80-120	3	35	29688	EPA 6010A	09/11/96

CHAIN OF CUSTODY FORM

126734

PAGE 1 OF 1

PROJECT NAME: KOT

JOB NUMBER: 133.005 LAB: Curtis + Tompkins

PROJECT CONTACT: Jeri Alexander / Meg Mendoza TURNAROUND: Normal

SAMPLED BY: Dennis Alexander REQUESTED BY: Jeri Alexander / Meg Mendoza

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX: WATER	SOIL	WASTE	AIR			CONTAINERS: VOA	LITER	PINT	TUBE			METHOD PRESERVED: HCL	H_2SO_4	HNO_3	ICE	NONE	SAMPLING DATE: MONTH	DAY	YEAR	TIME	NOTES	ANALYSIS REQUESTED: TVH & gas	BTXE	TEH edible(+ motor oil	VOC's (8240) w/ library search	SVOC's 8270 incl. PNAs	O&G	Heavy Metals	PCBs
-1	SCI-MW-2	X						5	5					X			X		09	04	96	1200	*	X		X	X	X	X	X	X
-2	MW-4	X						3	1					X			X		09	04	96	1300		X	X	X					
-3	MW-5	X						3	1					X			X		09	04	96	1315		X	X	X					
-4	Trip Blank #1	X						1									X										X				

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
Dennis Alexander	9/4/96 2:20 p.m.		9/4/96 @ 14:20
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME

COMMENTS & NOTES: * Please filter & fix before metals analysis

Subsurface Consultants, Inc.

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